The political economy of agrarian change in south-east Turkey

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Summary

This study is a contribution to a growing body of research on the political economy of state-driven agrarian change. Scholarship on agrarian change commonly asks how, why and to what end agrarian change occurs. Related to this is an on-going debate about what "kind of agriculture" humanity should strive for to fulfil multiple social purposes and meet ecological needs today and in the future.

The study's contribution is twofold. First, it provides an in-depth empirical case study on the political economy of agrarian change on south-eastern Turkey's Kızıltepe plain. The plain is located amidst Turkey's impoverished and violence-stricken South-east Anatolia region, which has been at the centre of major development efforts since the late 1990s.

Second, the study seeks to integrate empirical and theoretical works from different epistemic communities. In stressing the need to avoid the common tendency of remaining within epistemic silos, the study argues that integrating these different perspectives is both promising and necessary to further advance research on agrarian change. Using Hagedorn's (2008) Institutions of Sustainability framework as a point of departure, an integrative theory-based analytical framework is introduced. Important building blocks are derived from neoclassical agricultural economics, Marxist agrarian political economy and economic theories of institutional change.

The case study shows how the state's policies have resulted in a fundamental change to the modus operandi of local agricultural production. State intervention has been highly successful in catalysing intensification and productivity. Yet, contrary to official claims, agrarian change has not yielded prosperity and growth across all social strata. Intensified agriculture has led to severe repercussions for the social relations of production and reproduction and major ecological problems. Agrarian change in Kızıltepe is thus much less a success story, but rather a cautionary tale.

Keywords: agrarian change, political economy, institutional analysis, Turkey

Zusammenfassung

Die vorliegende Studie ist ein Beitrag zu einem wachsenden Bestand zeitgenössischer wissenschaftlicher Arbeiten zur politischen Ökonomie staatlich getriebenen Agrarwandels. Arbeiten zum Thema fragen, wie und warum Agrarwandel stattfindet und welches „Ergebnis" dieser Wandel vor dem Hintergrund der vielfältigen sozialen und ökologischen Funktionen der Landwirtschaft haben sollte.

Die Studie leistet zwei wesentliche Beiträge. Der erste Beitrag ist eine vertiefte empirische Fallstudie zur politischen Ökonomie des agrarischen Wandels auf der Kızıltepe Ebene inmitten der stark verarmten und notorisch gewalttätigen Region Südostanatolien. Der zweite Beitrag liegt in einer Integration von empirischen und theoretischen Arbeiten verschiedener Denkschulen und Disziplinen. Statt in epistemischen Silos zu verharren, wird hier argumentiert, dass die Integration verschiedener Perspektiven vielversprechend und notwendig ist, um die Forschung über den Agrarwandel voranzutreiben. Dies erfolgt zunächst durch eine bewusste und systematische Nutzung von Literatur aus verschiedenen Denkschulen und Wissenschaftsbereichen. Zweitens wird auf der Grundlage des von Hagedorn (2008) entwickelten *Institutions of Sustainability* Frameworks ein integrativer theoriebasierter Analyserahmen vorgestellt. Wichtige Bausteine hierfür ergeben sich aus Ansätzen der neoklassischen Agrarökonomie, der marxistischen Politischen Ökonomie und ökonomischer Theorien institutionellen Wandels.

Die Fallstudie zeigt, wie staatliche Politik zu einer grundlegenden Veränderung der Agrarproduktion im Sinne einer deutlichen Intensivierung und Produktivitätssteigerung geführt hat. Gleichzeitig hat der Agrarwandel, im Widerspruch zu offiziellen Verlautbarungen zu schwerwiegenden negativen Auswirkungen auf die sozialen Produktions- und Reproduktionsbeziehungen und zu massiven ökologischen Problemen geführt. Der Agrarwandel in Kızıltepe erscheint so vor allem als Negativbeispiel staatlicher Einflussnahme.

Schlagwörter: Agrarwandel, Politische Ökonomie, Institutionenanalyse, Türkei

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Abbreviations

AKP	Adalet ve Kalkınma Partisi
ARIP	Agricultural Reform Implementation Project
BC	Before Christ
BDP	Barış ve Demokrasi Partisi
CHP	Cumhuriyet Halk Partisi
CIMMYT	Centro Internacional de Mejoramiento de Maíz y Trigo
da	Decare
DIS	Direct Income Support
DP	Demokrat Parti
DSI	Devlet Su İşleri (General Directorate of State Hydraulic Works)
GAP	Güneydoğu Anadolu Projesi (South-east Anatolia Project)
GDP	Gross Domestic Product
ha	Hectare
HU	Humboldt-Universität zu Berlin
hp	Horse power
IAD	Institutional Analysis and Development Framework
IAMO	Leibniz Institute for Agricultural Development in Central and Eastern Europe
IMF	International Monetary Fund
IoS	Institutions of Sustainability Framework
IPARD	Instrument for pre-accession assistance for rural development
KCK	Koma Civakên Kurdistan
kg	Kilogram

km	Kilometers
KPD	Kommunistische Partei Deutschlands
NATO	North Atlantic Treaty Organisation
OECD	Organisation for Economic Co-operation and Development
ODTÜ	Orta Doğu Teknik Universitesi
PKK	Partiya Karkerên Kurdistanê
RDSP	Rural Development Support Program
SES	Social–ecological Systems framework
SPO	State Planning Organisation
TL	Turkish Lira
TMO	Toprak Mahsulleri Ofisi (Turkish Grain Board)
Turkstat	Turkish Statistical Institute
USDA FAS	United States Department of Agriculture Foreign Agricultural Service
USD	United States Dollars
USAID	United States Agency for International Development
YAS	Mardin-Ceylanpınar Groundwater irrigation network

1 Introduction

1.1 Agrarian change and the "agrarian question": Intellectual disputes that have shaped agricultural history

Agrarian change is one of the most dominant and long-lasting subjects of debate in the history of development theory. The primary concerns of this debate have been questions of how agrarian formations change over time, which social, political and environmental consequences those patterns of change imply and how agrarian change links with wider societal transformation. For more than two centuries, scholars concerned with agrarian capitalist transformation have studied how and why agrarian change occurs. In view of the plethora of thinkers who have addressed these questions under at times very different historical and political circumstances, the answers that have been provided have become accordingly abundant.

Along those lines, long-lasting intellectual disputes such as the renowned Lenin-Chayanov debate emerged (Bernstein 2009). Vladimir Iljich Lenin commenced from a development model of capitalist transition, which included the assumption of a gradual process of differentiation of the peasantry into classes of capital and labour (Bernstein 2009). Lenin also supported the idea that, by collectivisation, smallholder peasant agriculture must be remoulded into large-scale industrial-scientific farming. Agriculture could thus assume its destined role as a contributor to industrialisation as Lenin would argue. In contrast, Alexander V. Chayanov understood the peasant economy as a specific type of family economy. He argued that, through self-exploiting family labour, peasants exhibited a high degree of resilience against social and economic pressures (ibid.). Led by this conviction, Chayanov proposed a model of smallholder cooperation and cooperatives as the most promising and superior development trajectory for Russia's agriculture (ibid.). While Lenin eventually put his convictions into practice as the head of the newly founded Soviet Union, Chayanov was first imprisoned and later executed by the Soviet regime. With Chayanov's death, his theory of the peasant economy disappeared for decades from academic attention.

In hindsight, the Lenin–Chayanov debate is much more than a mere anecdote about the intellectual disagreement of two historic figures. Rather, it represents the initiation of a number of ongoing and oftentimes polarised disputes in which the "agrarian question" has come to represent a matter not only of positivist social research, but also of normative standpoints and political ideology. For early scholars like Karl Marx,[1] Vladimir Iljich Lenin[2]

[1] Karl Marx (1975).

[2] Vladimir I. Lenin (1977).

and Karl Johann Kautsky,[3] committing oneself to the "agrarian question" went beyond explaining "whether" and "how" agrarian change occurs, towards arguing what "end" it "ought to" pursue.

After World War II, and much in the spirit of Lenin's convictions, many scholars both in the soviet world and in the capitalist world began once again to dismiss small-scale peasant agriculture as an undesirable pre-modern mode of social organisation (Bernstein 2010). Smallholder agriculture, it was commonly thought, would need to vanish in order to give way to more progressive agrarian structures.[4] The conclusion was that agrarian policymaking and development should be channelled towards large-scale intensive agriculture, whose sole purpose was to "produce a maximum amount of economic output from the land" (Brade-Birks 1950 quoted in van der Ploeg 1990: 3). To Graham S. Brade-Birks and many of his contemporaries, "good farming" came to mean nothing else but output-oriented "intensive farming", a goal, they argued, smallholder production would certainly fail to achieve (ibid.).

Early on, the development model described here was also subject to harsh criticism. Thus, a number of authors, many of whom belonged to the left-leaning 1960s peasant studies, expressed their concerns regarding the social and ecologic impacts that would emerge from the establishment of large-scale industrial agriculture (Bernstein 2010). Taking a position very close to that of Alexander V. Chayanov many of these critics would defend smallholder agriculture against what they perceived as empirically unfounded and politically motivated accusations (ibid.). Smallholder family-based agriculture, they claimed, again arguing along the lines of Chayanov, deserved protection and support as it represented a socially and ecologically preferable alternative to industrialised production (ibid.).[5]

Meanwhile, the continued interest in determining the "ends" of agrarian change has not only been a source of academic disagreement, it has also repeatedly resulted in a tendency to place ideology above empiricism. Scholars on the left and right have accordingly treated theories of agrarian change as something that can be "designed" to echo their own political convictions and visions. Over and above that, the disputes over agrarian change have never remained

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3 Karl Kautsky (1971).

4 A prominent example of scholarship from the "capitalist world" in this regard is the Economic Growth Model developed by Walt Whitman Rostow (1956). Walt Whitman Rostow, a centre right leaning American economist and political advisor, argued that economic growth occurs in five basic historical stages starting from an initial "traditional society" stage in which subsistence agriculture is the dominant economic activity. Through the stages "preconditions for take-off", "take-off", and "drive to maturity" agriculture is first intensified, then commercialised and increasingly displaced by manufacturing and the service sector as the dominant economic activities. In the final stage, "high mass consumption" agriculture is completely industrialised and highly productive, but also of only minor importance to the overall economy.

5 The defence of smallholder agriculture is often subsumed under "agrarian populism" (e.g., Bernstein 2010). A problem with this term, however, is that it does not differentiate between purely ideologically driven authors and others who seek to support their arguments on an empirical basis.

strictly confined to academic circles. Instead, as the case of Lenin's political heritage once again illustrates, these disputes have regularly found their way into national and international agricultural policies, into development programmes and other means of political intervention in agriculture and rural areas. The translation of intellectual positions into political realities has thus also affected the development of agrarian systems and the lives of people working in agriculture. Extreme historical examples such as the forced collectivisation of smallholder farms in Russia in the 20th century show how the question of "good agriculture" and its "social role" has led to sometimes radical interventions with catastrophic social consequences (Conquest 1987).

As a matter of fact, the "agrarian question", as Karl Johann Kautsky (1854–1938) famously termed it, became a central matter of social and political conflict. Substantial and far-reaching social and political peasant struggles have been documented accordingly for the establishment of the capitalist economic system in 16th century Europe, for the Russian revolutions of 1905 and 1917, and for the dissolution of the colonial system after World War II (Bernstein 2010). In the late 1960's, the Vietnam War — framed as an instance of a peasantry's violent struggle against external imperialist aggression — turned into a battlefield of scholarly interpretation and analysis. The authors leading the associated debate including Joel S. Migdal,[6] James C. Scott,[7] and Eric R. Wolf[8] are today widely considered as the founders of the aforementioned peasant studies.

Yet, apart from such striking examples, it has likewise been shown how, in much less turbulent historical contexts, convictions related to the agrarian question have found their way into agricultural policies, into extension programmes and research, and even into the everyday practices of agricultural production (Uekötter 2012). Furthermore, dominant beliefs regarding what constitutes "good types of farming" as opposed to "inefficient", "backward" or simply "bad" farming can even influence how peasants themselves perceive their roles and actions (ibid.).

1.2 Understanding agrarian change today: A theme of unchanged intellectual appeal and political relevance

Today many problems related to the agrarian question retain much of their historic relevance and academic appeal. This is partly reflected in a continuously growing body of literature debating the differences and similarities of questions from the past with today's research problems (e.g. Bernstein 2011; Harriss-White, Mishra and Upadhyay 2009; Akram-Lodhi and

6 Joel S. Migdal (2015).

7 James C. Scott (1977).

8 Eric R. Wolf (1999).

Kay 2010; Moyo, Jha and Yeros 2013; Amin 2017). Moreover, many of today's most debated topics in the development studies, in rural sociology, in agricultural and environmental economics, and in the sustainability sciences, also point our attention to questions that were quite similar to those of the late 19th century. Studies concerned with contemporary manifestations of conflicts over land (e.g. Borras Jr and Franco 2010; Ballvé 2012; Borras Jr and Franco 2012; Hall 2013; Li 2014; Dell'Angelo et al. 2017; Goetz 2019) or scholarship dealing with the persistence of rural poverty (e.g. Saith 1990; Ellis 2000; Dixit 2013) are good examples. Current debates that appear to deal with unprecedented or, at least from a historic point of view, more recent aspects of agrarian change are nevertheless often explicitly or implicitly discussed along the lines of perspectives rooted in the tradition of early scholarly work on agrarian change. Examples for the latter include recent studies on the globalised agro-food economy (e.g. Weis 2008; Amin 2012; McMichael 2013), on environmental justice and agrarian social movements (e.g. Peluso 1992; Harris 2008; Edelman and Borras 2016), on the opportunities and risks associated with the increase in demand for biofuels and other land-based renewables (e.g. Oliveira and Schneider 2015; Searchinger, Beringer and Strong 2017; Goetz et al. 2017) or on a diversity of problems related to sustainable agriculture and nature protection (e.g. Aydın, Ӧzertan and Ӧzkaynak 2013; Scoones 2015; Blaikie and Brookfield 2015).

A central underlying question that unites this contemporary literature with earlier work on agrarian change is, what kind of agriculture is required to cope with the multiple challenges humanity faces in the present and future? These challenges concern the optimisation of cultivation methods and production patterns, and the sustainable use of resources and technological innovations. The same holds true for questions regarding the optimisation of farm size and the improvement of farm and sector-wide organisation. Last but most important, it also applies to questions regarding the rights and livelihood conditions of agricultural workers and people affected by agriculture and other nature-related sectors.

1.3 Agrarian change as political economy

Against this backdrop, the question of whether and how agricultural structural change and agricultural development should be promoted by government intervention is highly relevant. The role of politics deserves particular emphasis as states were and still are major sponsors of agrarian development interventions. Equally important, through regulatory means, politics continues to serve a central purpose as a facilitator of private sector engagement in agricultural development. Both observations are substantiated vividly by contemporary Turkish agricultural development policy, which I discuss in the course of this study.

Yet, while the role of the state is important, it is also necessary to stress the fact that, despite its substantial efforts to reshape agriculture for one purpose or another, the track record of state intervention in agriculture is at best mixed. In fact, Hayami and Ruttan (1985) consider poor agricultural policies to be the main cause of slow agricultural development in many countries. Part of the problem, is a widespread tendency by governments to design agricultural policy in ways that allow for the exploitation rather than the development of agriculture (Bates 2010). Yet, even in cases where improving rural economic conditions and ending rural poverty are the explicit goals of state intervention, the results are often the opposite of what the initiators had hoped for. Timmer (1991) stresses accordingly that "governments often feel compelled to intervene to demonstrate a commitment to these social objectives that lie at the heart of a government's political legitimacy" (Timmer 1991: 124), only to suggest further, on the heels of that observation, that

> *"[u]nfortunately, measures taken by the government to create jobs and to reduce poverty are often counterproductive. On occasion, government policies for both the macro economy and the agricultural sector are so bad that agricultural output declines, inflation runs out of control, and black markets become the major source of provisions for the non-farming population. In other circumstances, however, governments have intervened skilfully to stabilize the economic environment and stimulate rapid growth in the agricultural sector. The effect has been to increase demand for labour, pull up wages for unskilled workers, and permit substantially higher levels of caloric intake among the poor, a tangible marker of reduced poverty" (ibid.).*

From this illustrative account the question arises as to what kind of development trajectories state-driven agrarian change can and should facilitate, be it directly or indirectly through private sector promotion. Further, it must be asked whether these trajectories offer solutions for, or aggravate, the situation. Against the backdrop of these questions, agrarian change appears as a problem of political economy. Political economy is here understood as the emphasis placed on recognising "the political" that underlies any economic phenomena. What I mean by this is that both individual economic behaviour and the dynamics at the aggregated level of the economic sector are only to be understood if analysed as being embedded in and contingent upon their specific social and political context.[9] Here, agency is understood as *situated*, which means that an actor's scope for action, and thus also for his or her eventual behaviour, is to a degree determined by a pre-existing system of social constraints, including institutions and customs or the distribution of resources and political power. In reality, one will hardly ever encounter a societal context where the distribution of resources and political

[9] This understanding of political economy differs from the definition provided by public choice theory which attempts to explain political decision-making and political behaviour based on economic theory and methodology.

power and also the "rule content" of institutions and customs grant the same degree of freedom, agency and opportunity to all members of a society. Political economy, in the understanding proposed here, emphasises the need to account for "inequalities" as potentially decisive factors for both, structure and agency.

Questions that emerge from a political-economy framing per se include, for instance, the following: What motivates state intervention and which social groups are typical protagonists of state intervention? How does agricultural policy tend to frame the contexts and the people targeted by the intervention? What justifications are commonly brought forward in favour of state intervention? How does this framing affect the design and choice of actual strategies and means of intervention? How do people targeted by state intervention typically react to such endeavours and how does the design of state interventions affect the scope of agency for these people? Finally, and very broadly, what determines the success or failure of state interventions in different agrarian contexts?

Fortunately, to answer these questions there is no need to start from scratch. Just like agrarian change and the "agrarian question" in general, the political economy of agrarian change has also received significant scholarly attention.[10] Prominent cases in point include, for instance, the works by James Ferguson (1994) and James C. Scott (1998) or, more recently, David Mosse (2005), Tania Murray Li (2007) and, with a more international perspective, Arturo Escobar (2012).

1.4 An integrated approach to studying the political economy of agrarian change

Recent scholarship on the political economy of agrarian change, including the work mentioned above, suggests that, in order to answer the wide array of emerging questions, a scientifically sound understanding of the complex and multifaceted dynamics and consequences of agricultural development policies is crucial. A majority of the literature points out that there are no simple answers to any of these questions. In fact, of the many aspects we have learned about dynamics of agrarian change thus far, a major finding appears to be that context matters. This assessment is supported, among other things, by a steadily growing number of case studies on historical and current occurrences of state-driven agrarian change. The study at hand therefore thrives on the existence of a wealth of knowledge and experience, both with respect to scholarship on agricultural transition in general and with respect to the political economy of agrarian change in particular. Yet, while a lot of knowledge has been compiled up to the present, it is fair to argue that more remains to be learned. This is partly reflected in the fact that agrarian change continues to concern contemporary scholarship from a variety of

[10] For a recent review of scholarship on the political economy of agrarian change see Fairbairn et al. (2014).

fields; it is also further reflected in the fact that many of the early controversies regarding what constitutes "the right kind of agriculture" or whether and how states should actively engage in agricultural development remain unresolved and contested up to this day.

This study contributes to the growing body of recent work on agrarian change in at least two ways. Empirically, the study offers detailed insights into the current development of state–society relations, agrarian change and rural economic development in Turkey's South-east Anatolia region. More generally, the study produces context-specific findings by which it adds new pieces to the growing puzzle of knowledge on the dynamics of agrarian change in general. A second contribution rests on the study's deliberate bridging of empirical and theoretical works by different epistemic communities. While different epistemic communities often ask very similar questions regarding agrarian change, the debates, the theoretical and methodological approaches and even the findings produced by these communities nevertheless tend to remain confined to their "regular customers" and publication outlets. Contrary to this tendency of remaining within one's own epistemic silo, this study proceeds from the assumption that bridging the different perspectives is both promising and, in fact, necessary to further advance research on agrarian change.

The bridging of perspectives across and beyond epistemic boundaries is dealt with in at least two ways. While various pieces of literature from different schools of thought are consistently considered and related to one another, an integrative theory-based approach is used to analyse and explain the political economy of institutional and economic change in agriculture. The building blocks for this approach will be taken from a comparative and cross-fertilising discussion of neoclassical agricultural economics, Marxist agrarian political economy and economic theories of institutional change — three schools of thought which usually remain strictly confined to their respective methodological, conceptual and normative frameworks.

1.5 An introduction to the case study: South-east Anatolia in the scope of Turkish agricultural development policy

The case study presented in this work analyses the social and economic implications of more than 15 years of public support programmes for irrigation and mechanisation in South-east Anatolia. Turkey's South-east Anatolia region (Güneydoğu Anadolu) is commonly associated with economic stagnation, underdevelopment and more than three decades of political instability and violence in the wake of the Kurdish separatist movement and the wars in Iraq and Syria. The region is predominantly rural with limited employment opportunities outside farming, with agriculture therefore being the most important and often only source of income (Strohmeier and Yalçin-Heckmann 2010). In comparison to the rest of the country, South-east Anatolia also has the highest degree of inequality in terms of landownership, and access and

control of the productive forces. Further, in the absence of structural and institutional adjustments towards modern production methods, productivity in the region has remained below international and domestic average for decades (e.g. Karapınar 2007; Keyder 1989; Keyder and Yenal 2010; Morvaridi 1990).

The agricultural sector's low productivity has resulted in a lack of competitiveness of South-east Anatolian farmers vis-à-vis producers from other regions and countries. Smallholders and landless wage labourers in particular, who comprise the majority of the rural population, are in a constant struggle to secure their livelihoods. This has, in turn, resulted in massive outmigration, social conflict and deepened economic inequalities in the rural areas. Over and above that, it has also resulted in a system of exploitative and sometimes abusive dependencies between the rural poor and large local landowners. Scholars of South-east Anatolian rural life thus claim that semi-feudal property relations and power abuses by wealthy landowners and through tribal kinship networks persist today (e.g. Gürel 2011; Morvaridi 1990; Keyder 1983; Parvin and Hic 1984).

Successive Turkish governments have repeatedly — and over the last 25 years with particular dedication — announced that South-east Anatolia's social and economic problems would be made a political priority and that the region's predominantly Kurdish population would be lifted out of poverty. To fulfil this promise, Turkey's governments have focussed primarily on agrarian development, most notably on public support for irrigation and mechanisation. The overarching rationale driving these attempts has been that irrigated agriculture serving a global export market will accumulate the capital required for establishing a competitive local industry and service sector. Agrarian change, from an extensive, low-productivity system oriented occasionally towards subsistence, to an intensified, high-productivity system oriented exclusively towards the (national and international) market, is thus envisioned as the initial and fundamental step in a series of consecutive phases of economic transition.

In recent decades, the greatest and most controversial of these endeavours is, by far, the South-eastern Anatolia Project (*Güneydoğu Anadolu Projesi* — GAP). The GAP stands for a multibillion-USD development scheme which comprises plans for the erection of 22 dams, 19 hydroelectric power plants and the irrigation of 1.1 million hectares of arable land (Ünver 1997). The GAP, in all respects a megaproject, has received national and international attention and criticism, most notably with regard to the construction of dams on the Euphrates and Tigris rivers. Within the GAP, irrigation development represents one of the centrepieces in the quest for regional development. The project administration argues correspondingly that "modern irrigation techniques […] are among new policies geared to support economic and social development so as to make the region more competitive" (Government of Turkey, May 2008: 5).

Whereas the GAP with its magnitude and spatial reach stands as the very symbol of recent development attempts in the region, agrarian change is simultaneously triggered by a number of other national agricultural policies which, despite their potential impact on agrarian transformation, have received little scholarly attention. Since around 2003, substantial financial support has been given to parts of the farming community for acquiring and setting up irrigation technology and other machinery. Furthermore, subsidies are provided for agricultural inputs such as crop seeds, fuel, pesticides and fertiliser. Along with this financial support, the government has also introduced a number of regulatory changes with the goal of fostering and guiding agrarian change.

1.6 The objectives of the case study

A central question to be addressed by the case study is how the social relations of production and reproduction in agriculture have changed in the context of almost two decades of state intervention in the region. In other words, the study analyses whether, how and to what extent the state's efforts at agrarian development have translated into a reorganisation of South-east Anatolia's agricultural system. The study's findings will consist of a description and an explanation of the agricultural sector's trajectory of change from its pre-intervention state in the late 1990s all the way up to its state as last observed in 2013. Particular emphasis will be given to assessing the distributional outcomes as experienced by different social strata of the region's rural community. The study will also address the extent to which the reorganisation of the agricultural sector actually reflects the Turkish government's announced intentions, namely to increase agricultural productivity and competitiveness, and to make a major contribution to poverty alleviation and rural economic development. In pursuing these different objectives, the study links up to the primary concern of past and present scholarship on agrarian change, namely, to understand how agrarian formations change over time, which social, political and environmental consequences those changes result in, and how agrarian change links with wider societal transformation.

The aforementioned objectives translate into four research questions:

- *How and why does the agricultural production system change after state intervention in South-east Anatolia, and how can this change be explained?*
- *What social and economic impacts of agrarian change can be observed and what explains these impacts?*
- *To what extent does the reorganisation of agriculture reflect the Turkish government's officially announced intentions to increase sector productivity and competitiveness, and to foster rural economic development and poverty alleviation?*

- *What can be learned from the case of South-east Anatolia for our general understanding of agrarian change?*

1.7 A brief overview on research design and methods

Empirical findings are derived from case study research on the Kızıltepe plain in the South-east Anatolian province of Mardin. In choosing a case-study approach I follow Terry Byres argument, that in-depth case analysis which captures the complexity, historical contingency and diversity of agrarian transition in different contexts is crucial for any reconsideration of grand theories of agrarian change and social transition (Byres 2003). The Kızıltepe case study on agrarian change draws from a sequence of forty-seven qualitative open-ended interviews and two group interviews with key informants from Kızıltepe's agricultural sector and agricultural administration. The interviews were conducted in three consecutive phases during the period from 2010 to 2013. The interviews are complemented by secondary statistical data and secondary empirical work. The single-case design is particularly suitable as it allows the analyst to uncover peculiar context-related manifestations of agrarian change in a given case at great analytical depth.

1.8 The structure of this work

The study comprises eleven chapters including this introduction (chapter 1). Chapter 2 situates the present work within past and contemporary scholarship on agrarian change. It comprises three main sections. The first section discusses practices of state intervention with respect to predominantly economic motives. The second section of chapter 2 discusses practices of state intervention that occur in the context of what I term predominantly political motives. The third section reflects on the ideological motives driving state intervention in agriculture. The main objective of this literature review is to identify continuities and shifts in the motives, justifications and strategies of state-driven agrarian development over time and across contexts. Part of this endeavour will be to trace the different ways in which state representatives have tended to perceive agrarian communities and how the particular configuration of state–society relations has reverberated in the state's interventionist policies and programmes.

Chapter 3 acquaints the reader with the history of state intervention and agrarian change in 20th century Turkey. The rationale behind this review is that contemporary dynamics of agrarian structure and change in south-east Turkey are best understood if one also accounts for historical circumstances and processes and for their influence on today's context. In discussing the case of Turkey many coincidences with the examples presented in chapter 2 will become visible. Turkey will be shown accordingly to have followed a path of agricultural

development that largely coincided with the ideologies, the strategies and the motives of many other developing and transitional economies in the past century. At the same time, several aspects and circumstances will be highlighted that make Turkey a unique case. This observation applies particularly to the historical and present dynamics of poverty, inequality and ethnic violence in the country's south-eastern provinces — all of which have major repercussions on state–society relations in general and on agricultural intervention programmes in particular.

Chapter 4 reviews theories of agrarian change. I focus on theoretical approaches by three schools of thought whose contributions are particularly fruitful for contemporary research of agrarian change. The first of these is neoclassical agricultural economics; the second is Marxist agrarian political economy; the third school of thought is institutional economic theory. After discussing some of the central merits and a few crucial limitations of each of these schools, an analytical framework to research patterns of agrarian change, including its unanticipated social, economic and environmental outcomes in different contexts, will be elaborated. The framework which I propose here merges questions, concepts and evidence provided by multi-disciplinary scholarship on agrarian change.

Chapter 5 explains the methodology, the research design and the approaches that were chosen to conduct the research presented in this work. First, I briefly reflect on the epistemological foundations of my approach. I then justify and explain my choice of a qualitative research approach and the general research design, which in turn explain my choice of the case-study method and my reasons for emphasising the use of qualitative data. Following this, an overview will be given on techniques of data collection and data management. This chapter ends with a discussion on my personal role as a researcher in the field as well as some of the contextual particularities of doing case-study research on the Kızıltepe plain.

Chapter 6 discusses the Turkish government's development programmes in detail. The overview covers policies and programmes from the early 2000s until 2013. The aim of the chapter is to reflect on the multitude of mechanisms and strategies that the Turkish state has deployed in its role as an agent of agrarian change.

Chapter 7 introduces the reader to my case-study area, the Kızıltepe plain in the South-east Anatolian province of Mardin. This chapter elaborates on the specific contextual characteristics of Kızıltepe's rural community and agricultural sector. The chapter begins with discussion of context-specific sociocultural aspects, most importantly the plain's ethnic composition. This is followed by a description of the plain's agroecology and of prevalent production patterns. The remaining part of chapter 7 is committed to a detailed discussion of endogenous — i.e. local — factors which shape and constrain the social relations of production and reproduction in agriculture. This includes a description in succession of the

ethnic makeup of the rural community and life in the villages, the rural class structure, important agrarian institutions governing production and labour arrangements, and, finally, the local distribution and control of the productive forces.

Chapter 8 presents the results of my case study. This chapter assesses the structural changes that have emerged and continue to emerge as a consequence of more than a decade of state intervention on the Kızıltepe plain. The chapter is organised around a description and explanation of observable trends and effects in terms of a variety of aspects that together constitute a major example of "agrarian change". The trends I describe range from the widespread introduction of irrigation and mechanisation, to the emergence of new transactions and actor relations, to energy and input use, to cropping patterns and crop productivity, to land-use patterns and land markets, to livestock production and labour relations.

Chapter 9 discusses the results of my case study against the backdrop of my initial research questions, as well as with reference to the current debate on agrarian change depicted above and in the two literature reviews in chapters 2 and 3. This chapter is devoted to a discussion of the implications of agrarian intervention and change as experienced by the different social strata of Kızıltepe's rural community. Accordingly, I discuss and assess the different ways in which large landowners, middle-sized farmers, smallholders and landless labourers have tended to react and adapt (or tried to adapt) to the changing context of agricultural production on the plain.

Chapter 10 continues the discussion of my results by taking a viewpoint that assesses Kızıltepe's current and future development trajectory. The chapter is subdivided into three sections: the first section addresses the plain's social development trajectory; the second section provides an assessment of the economic development on the plain; the third section assesses a few of the environmental consequences associated with agricultural intensification on the plain. Finally, with a view to Kızıltepe's social, economic and environmental development trajectory, some recommendations for further research are made.

Chapter 11 concludes this study. First, it revisits the debate on agrarian change as presented in this introduction. A central argument that needs to be substantiated is that continuing the debate on agrarian change is today more urgent than ever. I proceed by reviewing the ways in which the present study contributes to this urgent need. Part of my review also comprises a critical appraisal of my research approach, including the choice of the qualitative case-study method and the usefulness of the analytical framework. The third part of chapter 11 summarizes the findings of the case study on state-driven agrarian change in Kızıltepe. Both of the research questions that drove the case study and the overall debate on the political economy of state-driven agrarian change are again revisited. Chapter 11 ends with a

discussion of the study's limitations and additional suggestions for further discussion and research.

2 Continuity and change in state-driven agrarian development

Agrarian change is driven by a range of factors among which state intervention plays a particularly significant role. Nation-states have repeatedly devoted substantial political, financial and even military resources to push their agricultural sectors onto a preferred development trajectory (e.g. Unger 2015). The level of dedication and resources that nation-states have given to agrarian policies reflects the importance that agriculture has always had in the wider context of state policy. James C. Scott's seminal work on state–society relations and agrarian change even proposes that the institution of the nation-state only emerged with the ability of certain social groups to control and shape farming (Scott 2009). Over time, and resulting from the critical role that farming plays to the survival of the state, governments across the globe became, and arguably remain, exceedingly powerful agents of agrarian change.

The significant and lasting role of states as agents of agrarian change renders the study of this agency an important endeavour. Or as Richards (1986) puts it: "it is vital to address the question of the role of state policy in shaping the processes of agricultural development […] and the implications of the problems created by those processes" (p. 2). Yet, why exactly have states taken such great efforts to intervene in agricultural transition processes? Who were the proponents of state-driven agrarian change? What strategies and means have been used by nation-states to intervene in agriculture?

The following section aims to highlight predominant and crosscutting patterns of state intervention in agriculture over time and space. Particular emphasis is given to a reflection of the motives that drive state intervention. I also point out the major protagonists in this effort, as well as the strategies and means that are typically deployed to achieve a preferred trajectory of agrarian change. The objective of this review is to identify recurring and crosscutting patterns, rather than to provide an in-depth description of specific cases. I therefore refer to examples from different regional and periodical contexts. The review will show that across this wealth of examples a number of distinct economic, political and ideological motives[11] can be identified as major drivers of agrarian change.

2.1 In search of economic revenue and growth

Economic considerations are at the centre of state intervention in agriculture. The majority of these considerations are connected to the necessity to steer and control agriculture's role as

[11] To distinguish between economic, political and ideological motives, as I am doing here, should not ignore the fact that, in reality, agrarian intervention is typically driven by several motives simultaneously, rather than by a single motive alone. Further, economic and political motives overlap and/or are mutually dependent.

the major contributor to the economy as a whole. James C. Scott shows how premodern states in South-east Asia understood agriculture's fundamental role in providing security of access and a reliable supply of food and raw materials (Scott 2009). Food and raw materials were put to numerous uses many of which were essential to the survival of the premodern state.

At the advent of the industrial revolution in the 18th century, food security became critical for satisfying the needs and demands of a growing urban population with changing consumption patterns. Furthermore, a reliable and cheap supply of raw materials was understood as an essential prerequisite for the functioning of the growing industrial sector. Sidney Mintz's seminal book, *Sweetness and Power — The Place of Sugar in Modern History*, serves to substantiate these observations. Mintz shows how the 18th century rise in global sugar production and trade was driven equally by the changing consumption patterns among the European middle and upper classes, as well as by the British rulers' desire to supply England's growing industrial work force with a cheap, high caloric food supplement (Mintz 1986).

Over the course of history, agrarian intervention has played a critical role in foreign policy considerations, both in times of war as well as in times of peace. In times of war and political crises, access to cheap food and raw materials was important to prevent widespread discontent and civic unrest, as well as to feed and fuel the army. Collingham (2011), for instance, shows how during World War II access to food became a central factor determining the outcome of the war and American dominance in the decades thereafter.

However, also in times of peace, agrarian policy would often be a central means to shape a state's foreign policy. A recurring motive against this backdrop was to reach self-sufficiency in domestic food production. China's Mao Tse Tung famously championed the idea based on the assumption that self-sufficiency would grant a higher degree of independence from international markets, reduce China's foreign trade deficit and stabilise prices and supplies for domestic consumers (Lardy 1985). While programmes for agricultural self-sufficiency were *en vogue* at the beginning of the 20th century and again after World War II, such aspirations persist to this day. Accordingly, Clapp (2017) shows how, in the wake of the 2008 international food crisis, countries as diverse as Senegal, India, the Philippines, Qatar, Bolivia, and Russia have expressed interest in improving their levels of food self-sufficiency.

Autarchy through self-sufficiency was often understood to decrease the state's vulnerability from external aggression. A case in point is the 1929 Wheat Campaign (*Campanha do trigo*) in fascist Portugal which served the twofold purpose of institutionalising the "ideology of the land" and of achieving a state of complete independence from international markets (Saraiva 2015; Saraiva and Wise 2010). The defensive purpose of Portugal's self-sufficiency programme is particularly well depicted in a 1940s poster celebrating the anniversary of the

Wheat Campaign, which read "the wheat of our earth is the border that defends us best" (*"O trigo da nossa terra — é a fronteira que melhor nos defende"*).

While some states have strived for autarchy through self-sufficiency, others aimed at engaging in international trade. Agrarian intervention in these cases would seek to organize the state's agricultural sector towards developing a comparative advantage and a high degree of competitiveness in the production of globally demanded commodities such as cotton, sugar, rubber, tea, coffee and grains (e.g. Beckert 2015; Mintz 1986; Tully 2011; Roseberry 1995). The export orientation motive has appealed to rich and poor countries alike. How European nation-states developed from being chronic suffers of domestic food shortages into becoming major producers of agrarian commodities is thus well documented (e.g. Moser and Varley 2013; Karel and Segers 2016; Martin 2016; Tracy 1991; Clar, Martín-Retortillo and Pinilla 2017). In the 1950s and 1960s, many post-colonial states in Africa, Asia and Latin America also opted for export-oriented development models (Escobar 2012).

A pattern that again cuts across the majority of historic cases is that, independent of motive, agrarian intervention was intended primarily as a catalyst to increase agricultural production and to guarantee a reliable supply of agricultural goods. The go-to solutions to achieve increased production were intensification and specialisation. Accordingly, various methods of intensification dominate many agrarian intervention programmes. Among the most important of such means are the introduction of machinery, plant and animal breeding, the use of fertilisers and pesticides, and the development and use of irrigation systems (e.g. Auderset and Moser 2016; Herment 2016; Brassley 2013; Perkins 1997; McCauley 1976).

Another important way to increase production to meet a growing demand was to specialise. Specialisation went hand-in-hand with the state's steering and controlling of production. In many cases, state intervention in agriculture was intended to promote the production of cash crops and to reduce incentives for subsistence production — subsistence products being, by definition, inaccessible to non-agricultural consumers, domestic or foreign. In their attempts to change and control farmers' crop choices, states usually resorted to regulation and institutional change (Scott 1998). The importance of regulatory measures is, for instance, reflected in Oliveira, McKay and Plank's (2017) analysis of the development of the Brazilian biofuels industry. The authors show that the development of a biofuels industry rested on strong state subsidies for production and processing, creation of markets through government procurement, fuel-blending mandates, price controls, as well as foreign trade tariffs, quotas, and multiple interventions in agricultural, environmental, and other regulations (Oliveira, McKay and Plank 2017).

The above examples show that agrarian interventions focussed strongly on obtaining economic security based on revenues from the use and trade of agricultural output. The same

is true for the African continent. Robert Bates, for example, argues that the agricultural policies of many African countries after the Second World War focussed specifically on diverting resources from farmers to other sectors of society, especially the urban upper and middle classes (Bates 2010). Bates continues to argue, that it is largely because of these exploitative agricultural policies that African countries have continuously failed to produce enough food to feed their populations and to lift their rural populations out of chronic poverty (ibid.).

In many other historic instances, the rural population itself would be the source of state revenue. Such population-generated revenue has been in the form of taxes or other duties (Scott 1976; Scott 1998; Scott 2009). Historically, as nation-states had only little accurate information about their rural populations, it was first necessary to identify, register and monitor those respective populations (Scott 2009). Similar importance lay in identifying and registering a population's physical assets, most notably land, and in monitoring agricultural production (ibid.). The introduction of different types of registries and titling systems, and the conducting of statistical enquiries played an important part in this process. A case in point is Vivier's (2014) study of 19th century Europe "the golden phase of state enquiries", which shows how systematic enquiries "fulfilled the desire for scientific knowledge [...] and the search for innovative solutions for the improvement of agriculture and rural life" but, at the same time, also represented a powerful political means to consolidate the still juvenile nation-states. Obtaining accurate information about taxpayers and the seasonal turnout of taxable goods was an essential part of this consolidation process.

The European colonial era during which rural populations in Africa and Latin America were turned into slave labour to produce food and raw materials for European colonial rulers is one of the darkest chapters in the context of state use of forced rural labour (e.g. Figueroa 2005; Nellis 2013; Reilly 2015). Against the backdrop of the Western colonial states' growing hunger for agricultural commodities, colonialism can be read as a massive expansion of those states' primary sector.

States not only tried to derive revenues from the fruits of labour of rural populations, they also tried to make direct use of rural labour itself. Rural populations were thus understood to be an important, untapped, labour reserve for the industrial sector, as well as for occasional use in public services. Getting people off the land, for instance, by facilitating land concentration and agricultural mechanisation, was therefore driven not only by efficiency considerations, but also by the understanding that the growing industrial sector required an increasing number of cheap labourers. The most notable example of this would probably be the enclosure of common lands in England in the 16th and 17th century, which resulted in millions of rural dwellers leaving the countryside to join urban work forces (Cohen and Weizman 1975).

The majority of the aforementioned examples indicate that agrarian intervention served economic motives that lay outside agriculture, giving agriculture a merely functional role as a provider of resources. In many cases, however, demand for agrarian intervention also came from within the agricultural sector itself, for instance, from business interests up- and downstream of agricultural production. In Telangana, India, Stone and Flachs (2017) show accordingly how private agribusiness interests teamed up with local administrations in an attempt to expand herbicide markets and open a niche for next-generation genetically modified cotton. As Stone (2007) argues, part of the strategy is to actively undermine traditional low-input production patterns that do not require the purchase of costly inputs, most notably chemical herbicides and pesticides.

Private business interests are often closely interwoven with the state apparatus. States even function as shareholders of private companies. A famous historic example is the East India Company, which served as a public-private intermediary to organise Britain's trade in goods throughout the 18th century. In cases, in which private businesses were owned by members of the political elite, these actors would regularly use their political leverage to influence agricultural policymaking in their favour. A rather recent example of this observation is given by Huggins (2016), who describes how agrarian development policy in many contemporary African states is the product of a mixture of developmental patrimonialism and party capitalism. To substantiate this observation, Huggins (2016) refers to the case of pyrethrum production in Rwanda, where a military-owned company utilises incentive-based governmental strategies, in line with state discourses, in addition to employing punitive, disciplinary regimes to organize and control the sector (Huggins 2016).

Agricultural producers themselves have both demanded and politically pushed state intervention. One among many examples substantiating this observation is provided by Gras and Hernández (2016), who show how technological changes in Argentinian agriculture have been driven by, and for the benefit of, Argentina's agrarian bourgeoisie since the mid-1960s. What follows from this is that — just as shown above — to draw a hard-line distinction between "state", "farmers" and "agribusiness" is not useful to the analysis, because to do so would, first, obfuscate the multitude of overlaps and connections that exist between those groups. Second, it would also severely downplay the scope of agency and influence that often is exerted by powerful members of the agrarian community.

Connected to the fact that many of the motives for agrarian intervention lie beyond the agricultural realm, is the further observation that the business-related proponents of such interventions are also found outside of agribusiness. Cases in point are any type of business or sector that depends on the delivery of certain raw materials, food or labour, or other actors who benefit directly or indirectly from public investments in rural areas, such as construction

firms, private financial institutions and many others. Van Lanen's (2014) study of the coevolution of railroads and irrigated agriculture in Washington State in the late 19th century serves as an example. Van Lanen (2014) describes how transportation of inputs and crops to and from central Washington became easier and cheaper with increasing railroad access. At the same time, however, more and more capital and labour entered the region. Particularly interesting about van Lanen's study is that the growth of the irrigation-based orchard sector was fuelled by private interests from outside the agricultural sector, namely, by railroad companies and local real estate boosters who sought to refinance the costs of the railroad expansion by promoting and selling the state's central desert as an orchard paradise "where dollars grow on trees" (ibid.).

2.2 Attempts to establish political access and control

Political motives for agrarian intervention are not so much connected to the agricultural sector per se, as they are to the state's attempt to access and control the people engaged in agriculture — the rural population. Because agriculture is the most important economic provider in rural areas, it represents a strategic arena in which to gain access to, and control over, people. Bernal (1997) who studied the effects of the forced expansion of intensive cotton production in conjunction with the Gezira irrigation project in Sudan concludes that "development projects are not solely nor even primarily economic in nature, but disciplinary institutions that establish authority, encode moralities, and order social relations" (Bernal 1997: 449).

A recurring aspect in the context of accessing the rural population were states' attempts to establish political and judicial control within their respective social and territorial peripheries (e.g. Hodgson 2000). In practice, this often proved complicated, as increasing geographic and social distance to the urban centres of power was tantamount to diminished state presence. Resulting from the limited reach of the state, rural areas and their agrarian populations sometimes represented safe havens for dissidents or for people trying to avoid criminal prosecution, other public charges, or forced public service or conscription (Linebaugh and Rediker 2013). For similar reasons, rural areas often attracted outlaws, renegades or other actors who may have openly or secretly subverted a state's monopoly on power (Linebaugh and Rediker 2013; Hobsbawm, Weys and Wirthensohn 2007). Beyond that, reducing the distance between state authorities in urban centres of power and rural populations was also essential to counteracting any emergence of political ideas or movements that could potentially threaten the state's political elite (Scott 1990).

States have resorted to different strategies to reduce the distance between their seats of authority to their respective peripheries. A major aim of these strategies was to establish or consolidate state power by gaining entry into these rural safe havens and by getting local

populations to withdraw their support for enemies of the state (Scott 2009). One of these strategies was to establish indirect rule based on the selective support of powerful rural actors. In some cases, this served to establish a federalist governance system. In other cases, however, indirect rule has had massive negative repercussions in the rural areas. Myers (2008) shows how the British colonisers' strategy of indirect rule in South Africa served as a template for segregation and corruption under the apartheid regime. Blok and Tilly (1974) describe how the Italian state's reliance on rural intermediaries fostered the birth of the Sicilian Mafia in the mid-19th century.

A more direct strategy to diminish the social and physical distance between state authorities and the rural population were technological and infrastructural interventions like the construction of roads, dams and communication networks. Larkin (2013) supports this by arguing that technological infrastructures, including irrigation networks, are in fact "material forms that allow for the possibility of exchange over space. They are the physical networks through which goods, ideas, waste, power, people, and finance are trafficked" (Larkin 2013: 327). Technological and infrastructural interventions were regularly connected to a fundamental remodelling of the rural landscape (Blackbourn 2006). The draining of swamps, clearing of forests and bushland, and the diking of river beds therefore did not serve exclusively to transform alleged wastelands into productive land, as was often communicated officially: it also served to make rural territories accessible to state authorities and to destroy potential hideouts (Scott 2009).

Against this backdrop, it is important to point out that smallholder societies in remote areas often opposed those kinds of state interventions with political-strategic organisation and competence. The fact that in many cases state actors and their collaborators failed to achieve their goals is therefore often less a consequence of geographical remoteness than it is a consequence of political-strategic actions by the opposing peasantry. Contrary to the partly romantic, partly racist, stereotypic portrayal of small farmers as ignorant and simple, they are in fact well-organised political actors who seek to participate in the political system with clear demands and goals. An example of this can be drawn from Onno Poppinga's (1975) account of the history of the East Frisian village community of Moordorf. The Moordorf peasantry organised themselves under the Spartacus League, the German Communist Party (KPD) and other related groups; they first successfully resisted the German Empire, and then later the National Socialists despite decades of massive repression and persecution (Poppinga 1975).

A number of other historic cases also point to less exploitative or control-driven motives for state authorities' attempting to establish a closer relationship to rural populations. In more recent times especially, rural populations have become a potential source of public support for the political rulers. Up to the late 20th century, rural populations made up a majority of the

citizens in most countries. In democratic countries, this meant that a majority of the electorate was based in the rural areas and that the rural inhabitants could exercise a certain degree of power over the state; they could choose to withdraw their political support if they were dissatisfied with the government's actions. For state authorities, accessing the rural population would first of all be crucial to obtaining accurate and prompt information about the political atmosphere and respective demands. Second, access would be critical to the state's ability to provide public goods that served to win the support of the rural electorate.

Rural actors themselves have been influential proponents of agrarian intervention by the state. Bauerly (2017) studied the emergence of agrarian capitalism and agroindustrialisation in the United States and traced the influence of political pressure exerted by agrarian social movements on state-building responses by the United States government including agricultural policy. In his study of the history of agrarian change in 20th century France, Cleary (1989) describes how a group of syndical and cooperative movements "embarked on a program of agrarian modernisation" in the early 1960s. Das (2007) describes contemporary Indian state intervention in the country's agricultural sector as a result of a limbo between two opposing political forces, the capitalist upper class, on the one hand, and the mostly rural, lower classes, on the other. These examples show that the relationship between the state and the rural population is not necessarily a one-way street. Rather than being a mute, passive and anonymous mass of people, rural actors have instead demonstrated agency on matters of their concern.

2.3 The quest for improvement and progress

The state's historic engagement in agricultural development has partly been the product of a rational political response to pressure and demands voiced by the rural electorate. It was, however, also the product of political ideology and discourse. The role of ideologies and discourses in agrarian intervention has received much attention in the literature and justifiably so (e.g. Ekbladh 2011; Li 2007; Arnold 2005; Fitzgerald 2003; Ferguson 1994). Images of modernity, progress and improvement have served as a powerful motivation and justification for actors engaged in the planning and implementation of agrarian interventions. An example of this is presented in Arnold's (2005) study on the "doctrine of improvement" which underpinned colonial policy as regards the British Permanent Settlement in Bengal in 1793. Arnold (2005) shows convincingly that this doctrine reflected a perspective strongly influenced by negative presumptions about India — most notably the colonisers' dissatisfaction with India's apparent poverty and deficient material environment — and served as a "precursor of later concepts of development".

As part of making a case for improvement, the rural population would typically be framed as socially backward, economically deprived, passive and incapable of self-help (Gilbert 2008). The rural economic system would typically be described as outdated, inefficient and even environmentally destructive. Unger (2015) shows how post-war proponents of agrarian development in developing and developed countries shared the conviction that the existing "traditional" institutional and cultural order in the rural areas was a main impediment to modernisation and development, and thus must be overcome — if necessary, by external force. Uekötter (2012) shows accordingly how romantic as well as racist stereotypes and prejudices vis-à-vis the German peasantry, throughout the 19th and 20th centuries, led many agricultural scholars and politicians of the day to believe in the existence of a *Traditionsbremse* (traditions hindering progress) (Uekötter 2012). The notion of the *Traditionsbremse* served as an explanation for what people perceived as the peasantry's reluctance to take up new technologies, practices and modern ways of life in general (ibid.). It also served as a justification for external intervention (ibid.). To Uekötter (2012), the peasants' reluctance to precipitously adopt new technologies in fact often stemmed from a high degree of expertise and a mature weighing of the opportunities and risks associated with costly investments (Uekötter 2012).

Administrative planners, intellectuals and politicians across ideologies and regions thus shared the conviction, or the strategic calculus, that external intervention was required to produce substantial agrarian change in the rural areas (Unger 2015). One assumption characterising this framing was a clear separation between the state, as the provider of betterment, and the rural actor, as the intended recipient. Or as Tania Murray Li (2007) puts it: "Planned development is premised upon the improvement of the 'target group' but also posits a boundary that clearly separates those who need to be developed from those who will do the developing" (Li 2007: 15). The developers would often reason that, upon transforming the land and the ways in which it is used, the people would eventually be transformed into "citizens" (e.g. Cullather 2013; van Beusekom 2002; Weber 2007). Cullather (2013) shows accordingly how scientific agriculture was considered more than a means to increase food production by the Americans and their allies: agrarian intervention was "an instrument for molding peasants into citizens with modern attitudes, loyalties, and reproductive habits" (Cullather 2013).

After the Second World War, the United States and the Soviet Union stood out as particularly dominant representatives of competing ideologies of and for agrarian development (McGlade 2009). Ekbladh (2011) thus elaborates how American-style modernisation policy became an ideological weapon against the influence of fascism and communism during and particularly after World War II. Cullather (2013) describes how the United States sought to use agrarian intervention as a method to win the battle with the USSR over Asia during the Cold War.

Carrying the slogan "where communism goes, hunger follows", American agricultural planners diverted rivers, remodelled villages, and introduced machines, chemicals, and genes in order to multiply the crops consumed by millions (Cullather 2013). The strategy underlying these aims was to develop an agrarian structure based on the American model. U.S. President John F. Kennedy and later President Lyndon B. Johnson supported the vision of "Kansas-style agribusiness guarded by strategic hamlets" as the ideal agrarian structure, a model that was deliberately at odds with the Soviet model of large collectivised farms (Cullather 2013). While Americans were heavily engaged in exporting the American development model to the developing world (Ekbladh 2011), political leaders from these countries also actively sought advice and support from the United States (Bamba 2010).

Ideology has been important further in providing arguments to justify a variety of types of interventions, including some with disastrous outcomes. A number of examples of particularly drastic outcomes stems from Europe's colonial era. Mann (2004) stresses the idea that transposing the colonizers' own cultural and social values on the colonised was important because it provided the former with a sense of justification and self-legitimation for one's own actions in the colonised countries. In keeping with the notion that "the end justifies the means", the British, and many other colonial powers, would frequently adopt this perspective to justify even the most exploitative actions and devastating outcomes. A similar case is presented by Bandeira Jerónimo (2015), who shows how Portuguese colonial officials prided themselves and were quite smug about having introduced progressive legislation prohibiting slavery, forced labour, and the ill-treatment of Africans in their colonies, while at the same time extracting forced labour from these very populations. The Portuguese colonisers sought justification for their policies not only vis-à-vis their colonised populations, but also, and probably even more importantly, vis-à-vis a critical public at home.

To reiterate, interventions driven by ideology often resulted in actions that were as drastic as, or even more harmful than, interventions driven by purely economic motivations. Davis (2001) for instance describes how the British belief in free trade and their efforts to "dismantle inefficient clientelistic food security nets", was part of the reason why India was hit with so many devastating famines while the British colonisers were not able to respond to the disasters that they themselves had created. Another example describes how ideology was at the root of the Soviet Communist Party's decision to dispossess and collectivise the peasantry in the period from 1929 to 1932, a decision which resulted in a famine that claimed more than 14 million lives (Conquest 1987).

In the context of ideology-driven agrarian intervention states also utilised rural populations and rural areas as real-life laboratories for social experimentation and social engineering. Van de Grift's (2013) study on land reclamation and internal colonisation in Holland in the 1920s

shows that technological innovation and social renewal projects were a widespread phenomenon in Inter-War Europe, as planners, intellectuals and political rulers were searching for ways to cope with population growth, economic crises and the aftermath of the World War I. The settlements and agricultural units that were created through these endeavours were explicitly understood to be and used accordingly as experimental sites to test new technologies, science-based organisational modes of production, and new forms of government intervention (Van de Grift 2013).

In the 1950s and 1960s, "the village" emerged as a preferred site of experimentation and a favoured topic of contemporary development discourse (e.g. Cullather 2006; Sackley 2011; Sinha 2008). Interestingly, throughout the period of village-centred development policy, the agrarian village was always a contested topos, referred to simultaneously as the manifestation and "nucleus of rural backwardness" and the reactionary forces that withstood change, on the one hand, but as the resilient social institution that one could build on, on the way to modernity and betterment for society as a whole, on the other (Unger 2015). Clearly one of the most often referred to examples of village-centred experimentation is Tanzania's Ujamaa village programme of the 1960s (Jennings 2007).

A number of works addressing the role of ideology in agrarian intervention scrutinise the role of experts, researchers and intellectuals as producers, proponents and enforcers of developmental narratives (e.g. Harwood 2012; Hodge 2007; Johnson 2009). The influence of experts and researchers rested partly upon their role as providers of information (Ribi Forclaz 2016). Or to put it in James C. Scott's terms, experts are crucial collaborators in the states' attempt to create a highest possible degree of "legibility" of the agrarian community and the agricultural sector (Scott 1998). Vivier (2014) stresses that any state intervention in the society requires a high degree of context-related information. However, in many cases enquiries and other methods of information gathering served several purposes like identifying suitable intervention mechanisms. Planners used experts' approval to gain confidence that their actions were contributing to the common good.

Experts and scientists, representing neutral, objective and experienced authorities on agrarian society and agricultural and technological matters, helped the state to legitimize and justify its actions (Escobar 2012). However, a slightly different side to the story is the strategic use of expert-based legitimacy and justification whenever an intervention was met with controversy or resistance. Ferguson (1994) describes how resorting to expert knowledge represents a widely used strategic move to depoliticize highly controversial development measures. Expertise may here be used to override opposing "non-scientific" opinions.

Further, experts repeatedly played a crucial role in "making the case" for the absolute necessity of intervention. Often this was accomplished by constructing a "development

problem" where no such problem existed (Mosse 1999). Büschel and Speich (2009) discuss how organisations and actors engaged in international development aid have taken their part in discursively "producing" the contexts designated to receive development aid. The authors show that by translating the development community's perceptions and explanations into actual projects, these perceptions actually shaped the development paths in rural areas across the globe. A prominent case is described by Mehta (2001), who traces how hydropower developers in Kutch, India discursively manufactured a public perception of water scarcity to justify and support the construction of the Sardar Sarovar Dam and to override criticism against the project. The authors show that the discursive construct "water scarcity" largely benefitted politicians, industrialists and large-scale farmers (Mehta 2001).

Experts are not only never genuinely neutral and objective, they are also subject themselves to political-ideological influence. Further, the collection and use of data is always selective. This implies that there is a subjective element that carries further potential for error in scientific assessments and expert recommendations. It also means that conscious choices are made whereby data which support certain claims likely to lead to a desired outcome may be overemphasised, while other data that may call the feasibility or success of an intervention into question are downplayed or ignored.

2.4 Summary

The foregoing sections discussed predominant patterns that cut across historic cases of state intervention in agriculture. State intervention was shown to be driven by a variety of economic, political and ideological motives and considerations. Economic considerations are connected to aspirations to use and trade agrarian output — namely, food and raw materials — as well as to obtaining revenues by tapping the rural tax and labour reserve. Many of the abovementioned examples indicate that agrarian intervention served economic purposes that lay outside agriculture, reducing it to having a merely functional role as a provider of resources and revenue. Economic policy has treated agriculture interchangeably as a basis for self-sufficiency and as a basis for export-oriented trade. Furthermore, agrarian intervention has been used to support specific economic interests domestically and internationally. A major takeaway in this regard is that state intervention is often designed to answer to the demands and at times agency of specific interest groups which are found outside of agricultural production. The people involved in production are not automatically the intended beneficiaries of agrarian intervention. Political considerations driving state intervention in agriculture are at times connected to aspirations to consolidate state power in rural areas. Agriculture, because it is the most important source of economic provision in rural areas, represents a strategic arena to create access to and control of rural populations. Finally, ideologies have been and still are a widespread and powerful driving force of state intervention in agriculture.

Corresponding to a given ideological framework, specific valuations and goals arise in relation to how agriculture is practised and also with regard to individuals engaged in agriculture. Ideologies also determine, conversely, which practices (and often which sorts of individuals or communities) need to be overcome in order that the goals of intervention be accomplished efficaciously and with as little resistance as possible. "The will to improve", as Tania Murray Li (2007) has termed it, is, in terms of its influence and consequences for agrarian intervention, synonymous with, and often even more decisive for intervention outcomes, than the influence and consequences of purely economic or purely political motivations.

In practice, agrarian intervention is typically driven by several economic, political and ideological motives simultaneously, rather than by any single motive by itself. Economic, political and ideological motives often overlap; they can be mutually dependent or used interchangeably as justifications and/or as a cover-up. Achieving a "political" aim, such as establishing judicial order in rural areas, may thus mean greater success in enforcing the payment of taxes and other mandatory duties. In turn, strengthening the economic situation of specific rural interest groups may pay off in terms of gaining political support from these groups. Goals and "truths" based upon ideological convictions serve to make interventions that may actually be motivated purely by economic or political concerns appear to have no alternative or to be "for a better cause".

Finally, in considering the dominant economic, political and ideological motives for agrarian intervention, several references were made to the individuals who demand and drive such programmes. The proponents of agrarian intervention comprise political leaders, intellectuals, business representatives and parts of the agrarian community. A special role lies with experts and scientists who greatly influence the public discourse and who design and implement interventions on the ground. The composition of actors demanding and driving agrarian intervention reverberates in the means and strategies used in practice.

3 State intervention and agrarian change in 20th century Turkey

The following review of state intervention and agrarian change in Turkey depicts four periods from the 20th century in chronological order. The first period covers the early republican years from the beginning of the 1920s until the mid-1940s. The second phase covers the decades following World War II, when Turkey became a recipient of international support through the Marshall Plan programme, up until the end of the 1960s, when Turkish agriculture became a celebrated showcase of the Green Revolution. The third phase depicts agrarian policy in the politically and economically tumultuous 1970s and 1980s. Finally, the fourth phase covers a period from the mid-1990s up to the early 2000s, when Turkey attempted a phasing out of protectionism and an opening of the agricultural sector to international capital.

3.1 1919–1945: The early republican years

The founding of the Turkish Republic in 1919 occurred against the backdrop of a major reorganisation of European nation-states at the end of World War I. The Turkish leadership around Mustafa Kemal Atatürk and Ismet Inönü had just succeeded in fighting Turkey's War of Independence and now needed to quickly consolidate the young republic in economic, political and territorial terms (Birtek and Keyder 1975). Generating sources of state revenue was pivotal in a number of ways. The state required major funds to finance domestic industrial development and to become independent from international trade and finance (ibid.). Further, the new Turkish state needed additional money to gradually clear international debts which it had inherited from its political predecessor, the Ottoman Empire (ibid.).

In the absence of any meaningful industrial productivity and having a majority of the labour force in the rural areas, Kemal Atatürk's ruling Cumhuriyet Halk Partisi (CHP) concentrated on agriculture as its major source of state revenue. To generate revenue, the CHP took measures to foster a steady increase in the output of food and raw materials from the agricultural sector. Up until the early 1920s, a high international demand for exportable crops like cotton led to positive growth rates in Turkish agriculture and an accompanying economic and political strengthening of export-oriented producers (Birtek and Keyder 1975).

Agricultural policy during the 1920s comprised a number of different measures to facilitate agricultural intensification. Substantial financial support was given to farmers who were willing and able to invest in machinery such as tractors (Birtek and Keyder 1975). The support programme was successful in increasing the number of tractors from a mere 200 to 2,000, most of which were acquired by wealthy large landowners (ibid.). However, the two clearly most far-reaching policy measures of the early years were the abolition of the tithe (*öshur*) in

1925 and the introduction of a new civil code which made the private acquisition of land easier to achieve (Jacoby 2008).

The abolition of the tithe was a radical and risky fiscal decision as it meant a sudden cut of 63 per cent of the direct taxation revenue and 23 per cent of the state's overall income (Jacoby 2008). The tithe had been collected on the basis of a flat percentage of farmers' output, but it frequently amounted to more than 10 to 12 per cent when accounting for abuse by local tax collectors (Birtek and Keyder 1975). Abolishing the tithe thus represented a political gift to large landowners, and freeing the small peasantry from a major burden and a depressant of surplus production. It also meant reducing an incentive for small- and medium-sized peasant farmers to resort to subsistence production as a way to avoid taxation or other forms of access by the state. The introduction of the new civil code therefore contributed to the privatisation of public and common land along with an associated increase in the overall number of small- and middle-sized farmers (Jacoby 2008). With an increasing number of peasants working greater areas of land under more favourable conditions, a major increase in overall agricultural output was achieved.

When the Great Depression hit in 1925, export markets for agricultural commodities collapsed. Export prices had declined by an average of 50 per cent from 1927 to 1931. According to Pamuk (2009) the collapse of prices and incomes from agricultural exports was also a key factor in the state's shift to protectionism after 1929. Facing the economic crisis, the Turkish state nevertheless retained its general focus on agriculture but resorted to the domestic wheat market as its main source of revenue. In doing so the state followed the rationale that increasing the middle-sized peasantry's agricultural output beyond subsistence would provide a surplus as a source of revenue as well as contribute to domestic food security and self-sufficiency. Unlike the export market which was mainly supplied by rich large landowners in Turkey‘s coastal regions, wheat production was pursued primarily by small- and middle-sized peasant farms in the interior and eastern regions of the country (Birtek and Keyder 1975). Resorting to the small- and middle-sized wheat growers was partly a result of lacking alternatives in the face of the crisis and partly a strategic decision to concentrate on that stratum of the peasantry with the least bargaining power (ibid.). Unlike the financially well-endowed and politically well-connected large landlords, the small- and middle-sized peasantry had no internal organisation supporting them and only very limited connections to the state or to the domestic and international markets (ibid.). The state understood this limited bargaining power as an opportunity: rather than taxing agriculture as had been the strategy in the era of the tithe, the new system of revenue generation was based on the establishment of a monopoly in buying and reselling wheat. The new Turkish state, through the establishment of local wheat purchasing stations, would buy the peasants' harvest at a fixed price and resell

the wheat at a higher price to domestic and international consumers, while retaining the difference as revenue.

The first state purchasing stations were set up by the State's Agricultural Bank (*Ziraat Bankası*) in 1932, in accordance with a law which initiated the price support programme (Birtek and Keyder 1975). In 1934 purchasing stations had been established in all administrative divisions and the domestic wheat market was soon largely under the state's control (ibid.). In 1938 wheat purchasing was officially placed under the authority of the newly founded Turkish Grain Board (*Toprak Mahsulleri Ofisi* — TMO). Although wheat trade constituted the focus of the TMO's activities, further crops were constantly added. The TMO thus started procurement of barley and oats in 1939, of rye in 1940, and of corn, maize, rice, vegetables and other agricultural produce in 1941. During and after World War II, the TMO would also organize the supply and distribution of gasoline, tires, meat, margarine and coffee. In other words, soon after it was founded, the TMO had become a pivotal and powerful channel of state influence on the peasantry.

The abolition of the tithe and the establishment of the purchasing monopoly for wheat stand out as the two most influential agricultural policies in the early republican era. Agricultural policy succeeded in bringing vast areas of additional land under cultivation. It also succeeded in increasing the number of middle-sized peasant farmers engaged in commercial wheat production. Together with a number of favourable policy measures, wheat production across Turkey rose substantially. The introduction of the Grain Board as the state's agent for purchasing and price fixing was a successful move which resulted in wheat growers eventually selling their surpluses to the purchasing stations instead of holding them back for subsistence consumption. Having established its position as the sole buyer and reseller of domestic wheat, the Turkish state successfully created its anticipated source of revenues.

At the same time, agricultural producers — middle-sized wheat producers in particular — became increasingly manifest and institutionalised as the state's most important contributor of revenue income. The middle-sized peasant farmers also experienced both the benefits and risks of market protectionism: selling ones' produce to the Grain Board meant steady access to cash and therefore access to consumer commodities which had previously been mostly out of reach in a subsistence economy; on the other hand, the peasant became fully dependent on the prices offered by the state. With the peasants' increasing integration into the logic of the market, returning to subsistence production became less and less an option. One of the consequences of this new dependency was an increasing politicisation of the middle-sized landowning peasantry (Birtek and Keyder 1975). Another notable consequence to selling to a protectionist state monopoly was the relative slowing down of structural adjustments in terms

of agricultural intensification and mechanisation; wheat growers in Turkey simply were not confronted with world market competition.

3.2 1945–1970: Intensification and internationalisation of Turkish agriculture

In the decades following World War II, agriculture steadily secured its status as Turkey's most important economic sector. While the industrial and the service sectors remained of negligible size and importance, agriculture had begun to provide a large portion of employment and state revenue (Ilkkaracan and Tunali 2010). The TMO continued its role as the Turkish government body for purchasing and price fixing. One of the most significant measures of the early 1940's was the decision to redistribute large areas of public land by transferring state-owned lands and communal pastures to landless peasants and village cooperatives in accordance with the government's Land Distribution Law of 1946. The amount of cultivated land thereby increased by 55 per cent from 14.5 million hectares in 1950 to 23 million hectares by 1962 (Altunışık and Kavli 2005; Gürel 2011). As the majority of land was distributed among landless peasants, the law also meant that the numbers of small- and middle-sized landowners across Anatolia increased substantially.

The 1950's began with a major political upset, the root of which was the CHP's agricultural policy. In 1950 the CHP, the party of Turkey's founding fathers, Kemal Atatürk and Ismet Inönü, lost the general elections to the newly formed Demokrat Parti (DP). For the first time in Turkish republican history a new party had come to rule and the basis for this shift in political power was the rural vote. Large landowners and commercial farmers were strongly dissatisfied with rural economic development and their lack of representation through the CHP which remained dominated by bureaucrats and dissociated from the political interests of rural capital (Jacoby 2006). The DP, led by Adnan Menderez, a wealthy farmer from the Izmir region in Western Turkey, rallied support promising that, once in power, he would back the interests of rural capital (Jacoby 2006). After the elections, the DP kept its promise. Following a range of favourable policies by the new government, including subsidised mechanisation, large commercial farmers began to benefit greatly from the political change. The primary consequences of this policy were a wave of land concentration — large landowners increased their holdings by an average of 31 per cent — and a relative political and economic weakening of the small- and middle-sized peasantry (Jacoby 2006).

Probably even more important than its national agricultural policy measures, the DP benefitted from Turkey's accession to the European Recovery Fund under the Marshall Plan established in 1948. Turkey's accession to the Marshall Plan occurred largely in parallel with its becoming a member of the IMF and NATO. Taken together these political steps resulted in an opening of the country — the agricultural sector in particular — to foreign investment and influence.

It also resulted in a further strengthening of export-oriented economic policy in which agriculture once again had a central role. Accordingly, Turkey was looked upon as "the agricultural storehouse of Europe", whose role it was in particular to "produce more grains with the help of foreign investment and more liberal credit policies" (Gürel 2011: 202). Turkey's agrarian potential made the country "an essential cornerstone of an American geostrategic vision of Western Europe" (Hartmann 2015).

The Marshall Plan amounted to a total of 1.2 billion USD in financial aid to Turkey from 1948 to 1959 (Gürel 2011). Most this aid went towards industrial and agricultural development, with the Turkish Ministry of Agriculture being among the major recipients. Agricultural development based on the Marshall Plan budget concentrated on intensification of agricultural production through mechanisation, most notably the introduction of tractors and irrigation systems. Mechanisation was taken up at considerable pace. In 1950, the year the DP came to power, only 6,000 tractors were in operation; but by 1952 that number had increased nearly fivefold to 25,000. Only four years later, in 1956, this figure had again nearly doubled to 44,000 tractors in operation. By 1967 the number of tractors in operation had reached 75,000.

Irrigation, in contrast to mechanisation, developed much more slowly than anticipated. Scheumann (1997) stresses that by the end of the 1950s only 1.2 million hectares of farmland were effectively irrigated, despite an estimated total potential of 6 million hectares of arable land. In 1963 irrigation was again made a development priority when the newly founded State Planning Organisation (SPO) was mandated to implement the First Five Year Development Plan (ibid.). By the end of the 1960s, as a result of the SPO's interventions, irrigated agriculture had been successfully introduced and developed in two coastal regions of Turkey, the Çukurova and the region around Izmir. Once the irrigation systems were in place and operating, Çukurova and Izmir became the major producers of exportable cash crops like cotton.

The early 1960s also mark the beginning of what has been termed the Green Revolution in Turkey. From 1962 onwards, the country experienced stagnating productivity despite the aforementioned increase in agricultural machinery and the partial access to irrigation (Gürel 2011). The solution was sought in the introduction of inputs such as fertilisers, pesticides and most importantly plant breeding. In 1965 the International Maize and Wheat Improvement Center (Centro Internacional de Mejoramiento de Maíz y Trigo, CIMMYT), provided Turkish farmers with high yielding wheat varieties from Mexico. The measure soon proved successful. By 1968 Turkey was among the countries hailed by William Gaud, director of the US Agency for International Development (USAID), for its accomplishments in line with the Green Revolution.

> *"Turkey has demonstrated that she can raise yields by two and three times with the new wheats. Last year's Turkish wheat crop set a new record. In 1968 Turkey will plant the new seed to one-third of its coastal wheat growing area. Total production this year may be nearly one-third higher than in 1965" (Gaud March 8, 1969).*

The vast majority of machinery and other inputs during the 1950s and 1960s were imported from the United States. Whereas this is partly indicative of the lack of Turkish alternatives at the time, it also shows the importance — and power — of the Marshall Plan in creating international demand for American technology. Türk Traktörü, the first company which started producing tractors "made in Turkey" in 1954, was founded as a joint venture between Ankara and the United States. By inviting international aid and foreign direct investment into the country's economy, the Turkish state now had to balance its own interests and demand for revenue against the interests of a new international constituency as well as a continuously growing and increasingly politicised peasantry.

Throughout the 1950s, '60s and '70s when the Marshall Plan and the Green Revolution radically changed Turkey's agricultural production, the state's strategy for revenue generation from the sector remained essentially unchanged, that is, it continued to be based on monopoly acquisition and resale of agricultural produce through the TMO. In fact, although the state's monopoly on marketing agricultural produce had initially applied only to wheat, the system was expanded successively to include other important crops. Consequentially, the economic situation for Turkish peasants remained largely contingent upon favourable conditions provided by the state's price-fixing policy. Additionally, with the Turkish agricultural sector's increasing export orientation, pricing policy became increasingly important as a protection measure against international competition.

Agricultural intensification which occurred in the context of the Marshall Plan and the Green Revolution was largely confined to specific regions like the western coastal region around Izmir, the Çukurova close to the city of Adana and, to a slightly lesser extent, central Anatolia. The reasons for this selectivity are disputed. One aspect was that the coastal areas were deemed favourable in terms of agroecological conditions. Furthermore, these regions had been earlier centres of export-oriented cash crop production, most notably of cotton and wheat. There was comparatively well-developed infrastructure in place to connect the farms to the large urban economic centres and their Mediterranean ports. Moreover, as the DP's rise to power had shown, peasants and especially large landlords in these areas were much better connected to the state apparatus than the peasantry in other parts of the country.

Eastern and south-eastern Turkey, on the contrary, were mostly landlocked, disconnected from major centres of commerce and devoid of modern transport infrastructure. The peasantry, the majority of whom were ethnic Kurds, lacked any meaningful political organisation and

representation, and were instead dominated by the local landed elite. Turkey's eastern and south-eastern provinces therefore remained largely outside the focus of agricultural policy and thus excluded from the majority of investments and interventions that occurred under the Marshall Plan and the Green Revolution programmes.

In summary, the three decades after World War II brought substantial intensification and modernisation to certain parts of Turkey's agriculture. In addition to the country's ongoing development, disparities in social and economic status increased between the regions.

3.3 The 1970s and 1980s: Agriculture in times of political and economic turmoil

The 1970s and 1980s were overshadowed by political turmoil and economic recession. Violence and political murder from the radical left and right led to two consecutive military coups in 1971 and 1980 (Heper and Evin 1988). Turkey's internal political instability coincided with the global economic recession in the late 1970s. The associated decline in international commodities trade posed a particular challenge to Turkish agriculture, as the former severely impaired Turkey's agricultural exports. Unfavourable international prices for agricultural commodities further impinged upon the state's price-fixing strategy, thus diminishing the country's revenue and protection of its domestic producers through price support.

While political and economic instability were being felt across the country, the situation turned particularly bad in the country's impoverished eastern and south-eastern regions. In 1984 the Turkish military and the left-leaning Kurdish Partiya Karkerên Kurdistanê (PKK) came into violent conflict (Dunn 1995; McDowall 2010). The Turkish government responded by putting those regions under martial law and, in 1987, under a state of emergency which in some provinces was upheld until 2002. Furthermore, some 200,000 soldiers and policemen were deployed to the area to fight the PKK. The increasing violence in the region resulted in massive depression of the region's already underdeveloped agricultural sector. Investments and inputs failed to be delivered and peasants frequently had to interrupt agricultural production and flee from their land.

The Kurdish conflict also ignited other clashes and occasional violence among different strata of the peasantry itself. The PKK used peasant villages as hideouts and as a basis for supply — at times with the peasants' consent, at other times without it and by force. Furthermore, by promising to eliminate inequalities among the Kurdish peasantry, the PKK was able to successfully recruit many of its fighters from this local cohort. The state in turn installed a system of 25,000 "village guards" to uproot the PKK's rural support. The village guards, who are today blamed for atrocities and dispossession in the rural areas, were predominantly recruited from the regions' powerful Kurdish tribal families and the landowning elite who

tended to oppose the PKK's egalitarian ideology. The political divisions among these groups led to further hardening and amplification of social and economic differences within the Kurdish peasantry.

The state's military engagement was flanked by unprecedented agrarian intervention. The Turkish state had barely been present in the day-to-day lives of Kurdish peasants during the decades prior to 1970; but after that time, it made itself felt as an aggressor and as a would-be developer at once. By the 1980s, the Turkish government had decided to move ahead with a major hydroelectric and irrigation development scheme in the South-east Anatolian Euphrates and Tigris Basins. Although the initial idea of developing hydroelectric power and an irrigation system on these rivers traces all the way back to the 1930s, by the 1980s the matter seemed pressing and the situation opportune at once. The SPO which had already overseen the development of irrigation projects in the Çukurova region some twenty-five years earlier was given responsibility to implement the so-called GAP. The multibillion-USD GAP scheme comprised plans for the erection of 22 dams, 19 hydroelectric power plants and the irrigation 1.7 million hectares of land (Ünver 1997). The scheme's officially communicated objective was to fundamentally transform the region's agrarian structure towards technological and institutional modernisation, to increase economic prosperity society-wide and to generally improve rural livelihoods. Since its start, the GAP has developed into the largest and most controversial agricultural development scheme in Turkey's republican history (Öktem 2002). National and international criticism, for example, were aimed at the social and ecological consequences of dam construction on the Euphrates and Tigris rivers. Also, many voices have questioned whether the GAP scheme is actually as "exclusively philanthropic" as Turkish authorities have claimed it to be. Accordingly, a number of scholars offer alternative perspectives on the state's decision to move ahead with the scheme at just the point in time when the Kurdish conflict had turned violent. One of these perspectives points to the creation of market and business incentives for foreign and domestic capital investments (Harris 2002). Other studies explain the state's motive to use the GAP as a way to increase access to, and control of, South-east Anatolia's rural population, as well as a means to counterbalance the influence of the PKK (Harris 2008; Harris 2009). Ronayne, Harris and Yildiz (2005) argue that the GAP partly offers the opportunity to reshape the region's territory and, in so doing, to diminish the number of PKK hideouts by way of inundating vast swathes of land.

3.4 The 1990s to 2003: Agriculture in times of financial crisis and neoliberal economic reform

The 1990s saw a continuation of the economic problems that had overshadowed the 1970s and '80s. However, unlike the situation in previous decades, the Turkish government had begun to feel increasing pressure from international financial institutions and donor agencies

to abandon its traditional developmentalist approach and liberalise its economy (Aydın 2010). Particular pressure was exerted in the area of agricultural policy (Eder 2003). Against this backdrop, demands were placed on Turkey to further open its agricultural sector to foreign investment and to abolish all forms of protection and support for its own agricultural producers (ibid.). Part of these demands would entail the demolishing of the state's strategic steering of crop markets and prices. In other words, after serving for over seven decades as arguably the most important agricultural policy tool for, and the motor of, domestic revenue generation, the TMO and other associated institutions and agencies had become under serious fire. The liberalisation of the Turkish economy was met with much opposition within the country (Eder 2003). However, the proponents of the envisioned neoliberal reforms — both within and outside Turkey — were convinced that slimming down agricultural support, while at the same time opening the agricultural sector to international investment, would lead to a substantial decrease of national debt and a much welcomed influx of foreign currency.

In 2001, during which Turkey was experiencing a major financial crisis, the Turkish government bowed to mounting international pressure by introducing the Agricultural Reform Implementation Project (ARIP). The ARIP had been initially promoted as part of a programme of "structural adjustment" by the World Bank and the IMF to serve "as an exemplary reform package which could also be adopted by other developing countries" (Karapınar, Adaman and Özertan 2010). The ARIP contained a "Direct Income Support" (DIS) component which was designed to buffer the impacts of a gradual decrease and phasing out of agricultural support instruments, which had amounted to four per cent of Turkey's gross domestic product (GDP) by the year 2000 (Akder 2010). A second component of the ARIP, the "Alternative Crop Program", aimed to convince farmers to move away from heavily subsidised crops to alternative crops. Finally, the ARIP contained a third component, the "Agriculture Sales Cooperative Unions Restructuring", which aimed at reducing government involvement in the production, marketing, and processing of agricultural commodities (ibid.).

DIS was officially initiated in order to balance out possible short-term negative impacts from the phasing out of input subsidies and price support (Çakmak and Dudu 2010). In theory it served to decouple subsidies from production decisions but required farmers to participate in a registration process (ibid.). DIS took the form of a subsidy payment per hectare of land, independent of the kind or quantity of crop produced (ibid.). Officially the programme was targeted specifically at small- and middle-sized producers, as these groups were assumed to be those who would be hardest hit when the established subsidy system was ultimately terminated (ibid.). To achieve this aim, only farms up to a maximum of 20 hectares of land received DIS, while very small farms received a lump-sum that actually amounted to a higher rate of DIS per unit of land (ibid.). Farms larger than 20 hectares were assumed not to need subsidies, so they were thus excluded from receiving DIS (ibid.).

Upon drafting the programme, the initiating institutions disagreed as to who should benefit from the subsidy. While the World Bank had opted to pay landowners (the choice that would ultimately be realised), the Turkish government had initially opted to pay producers (Akder 2010). The decision to pay the subsidy to registered landowners sparked immediate outcry among groups representing small- and middle-sized farmers who protested that the support would likely end up as an additional source of income in the pockets of absentee landowners. And in fact, it would turn out that absentee landowners regularly defaulted on transferring DIS payments to their tenured holders and sharecroppers (ibid.).

In his analysis of the DIS scheme, Akder (2010) finds that, other than intended, many small farmers remained unregistered and thus deprived of the subsidy, despite the prospect of their gaining access to direct payments. The reasons for this lay partly in the high transaction costs of the required documentation and partly in farmers' distrust of the central authority and the fear that the information gathered by the government could later be used against their interests, for example, for purposes of taxation (ibid.). Further, wealthy landowners of large but also of many middle-sized farms were found to be receiving DIS despite their being legally excluded from doing so. To accomplish this, these wealthier landowners would divide their land among their siblings and thus create numerous smallholdings each of which was eligible independently to receive DIS.

Unsurprisingly, therefore, from their very inception the ARIP reforms had met with major resistance by the peasantry, large- and smallholders alike. It stands to reason that the political voicing of their discontent played some role in the fact that, after the general elections in 2002 and again in 2006, the new AKP[12]-led government began to dilute the ARIP by way of reintroducing input and production-oriented payments for fertilisers, fuel, seeds, alternative crops, credits and other types of support (Akder 2010).

During the 1990s, in South-east Anatolia and other eastern provinces the conflict between the Turkish military and the PKK escalated even further. The consequences were mass outmigration from the rural areas, the destruction of thousands of villages and almost 40,000 lost lives (Sönmez 2008; van Etten et al. 2008). In a series of notorious village raids the Turkish military evicted 378,000 Kurds from their homes, many of whom have never returned to the region (Strohmeier and Yalçin-Heckmann 2010). Furthermore, to facilitate its military operations and to establish control in the rural areas, the state declared martial law in almost all of the south-eastern provinces and then installed a several-thousand-head strong paramilitary force of "village guards" to undermine the PKK's local support (ibid.). In the meantime, implementation of the GAP had begun to lag behind schedule due to a mixture of

[12] *Adalet ve Kalkınma Partisi* (AKP in subsequent mention).

problems including a lack of funds, bureaucratic hurdles and political resistance as well as the declining security situation in the region. Some of the hydroelectric power plants, such as the Atatürk Dam on the Euphrates, had been installed successfully. However, little progress had been made in the establishment of irrigation systems. As of 2002, only 215,080 of a targeted 1.7 million hectares had been irrigated (Kibaroğlu 2003). In the majority of areas designated for irrigation through GAP, the Kurdish peasantry were still waiting for those blessings promised by the state.[13]

3.5 Summary

Throughout the 20th century agricultural policy has been at the centre of Turkish policymaking. Agriculture has been the most important source of state revenue and employment in Turkey and more than once agriculture has been a deciding factor in the course of changes in political power. Agricultural policy, while always oriented towards productivity, has oscillated between two conflicting goals, exploiting surpluses from agriculture and appeasing rural voters through protectionist policies and subsidies. One of the most influential institutions in this regard has been the TMO which pursued these goals through the exclusive purchasing and reselling of agricultural commodities.

In seeking the most promising source of revenue and in an attempt to respond to demands from its electorate, the Turkish state has variously supported different strata of the peasantry in different ways, over time. The state's decision to support one or the other stratum of the peasantry has been the result of a number of factors. These include a rational reflection of the country's general economic situation, partisan influence from parts of the peasantry — most notably large landowners and commercial farmers from Turkey's western provinces — and, at least since the 1950s, political demands by international financial institutions, international donors and transnational corporations. The 1990s and early 2000s finally mark a shift away from the traditionally protectionist agrarian policy strategy to neoliberal reforms which aimed directly at the elimination of agricultural subsidies and price support.

Selective state intervention in agriculture has repeatedly influenced and amplified the trajectory of class differentiation in the rural areas. It is also a main reason for the continuous amplification of development disparities between the privileged western provinces and the impoverished and violence-prone Kurdish south-east. In South-east Anatolia, the state had long been nearly absent; but when the Kurdish conflict turned violent, in the 1980s, the state

[13] By 2014, out of the envisioned 1.8 million ha, still only 424,710 had been effectively brought under an irrigation scheme. An additional 171,088 ha were officially "under construction" leaving more than 1.2 million ha or almost 67% of the envisioned irrigation scheme no further than a mere pronouncement (GAP Regional Development Administration 2016).

became present in the lives of the local peasantry both as an aggressor and, through the GAP, as a statist would-be developer.

4 Theorising agrarian change

Theory and theorising fulfil two central tasks in the context of this work. In line with Creswell (2014), theory "is used as a broad explanation for behaviour and attitudes, and it may be complete with variables, constructs, and hypotheses." Its second task is to serve as "a theoretical lens or perspective in qualitative research, which provides an overall orienting lens […]. This lens becomes a transformative perspective that shapes the types of questions asked, informs how data are collected and analysed […]" (Creswell 2014: 64).

In this chapter, I focus on theoretical contributions by three schools of thought which are particularly prominent in contemporary research of agrarian change. The first is neoclassical agricultural economics, the second is Marxist agrarian political economy and the third school is institutional theory. I show that while some analogies exist between the three schools, each approaches the analysis of agrarian change from very different basic assumptions, and each applies a uniquely different focus and perspective to the object of investigation. Compared to one another, the three schools of thought not only offer us fundamentally different explanatory approaches, but they ultimately also provide us with a very different understanding of what we mean when we talk about agrarian change.

Each of the respective schools will point our attention to specific aspects of agrarian change, some of which remain unexplained by other theoretical approaches. This means that if we rely on one school of thought exclusively, other potentially relevant aspects will escape our field of view. Therefore, rather than aiming at a fundamental critique and selecting one school over another, my goal is to show to what extent the different theories can complement each other with regard to highlighting and explaining different aspects of agrarian change. Building on this line of reasoning, I attempt to combine the three schools of thought into one analytical framework that supercedes the limitations of the individual schools and instead helps us to produce a more holistic view.

4.1 Neoclassical agricultural economics

Neoclassical agricultural economics studies the economics of farm management and commodity markets, and also considers the broader linkages between agriculture and other segments of the economy. As part of this broader thematic perspective, scholars from this school have been committed to studying the economics of food systems and natural resource use, as well as dynamics of international agricultural trade (Gardner and Rausser 2001). A large body of work has been produced for a wide array of research topics, including the study of market and price dynamics for agricultural commodities (e.g. Meyer and Cramon-Taubadel 2004; Ivanic and Martin 2008; Headey and Fan 2008; Gilbert 2010), of labour arrangements

and labour markets in agriculture (e.g. Ellis 2000; Swinnen, Dries and Macours 2005; Das, Janvry and Sadoulet 2019), of farmer behaviour under uncertainty and risk (e.g. Binswanger 1980; Pannell, Malcolm and Kingwell 2000; Wossen, Berger and Di Falco 2015), and of technology adoption in different contexts (e.g. Hadley 2006; Aker 2011; Kassie et al. 2015; Damania et al. 2017). As part of this broad research scope, neoclassical agricultural economics has contributed greatly to understanding and explaining the evolving organisation and structure of agricultural production, that is, to theorising agrarian structural change (Chavas 2001).

Agrarian change can be framed — and thus analysed — in various ways. In neoclassical agricultural economics particular emphasis is laid on the question of what factors determine the evolution of farm size and how farm size connects to economic efficiency (Chavas 2001). Against this backdrop, a number of questions have motivated neoclassical agricultural economists. These include the following (according to Chavas 2001): What is the optimal farm size? Are large farms more efficient than small farms? What explains the persistence of small family farms in developing and developed countries? What will the agricultural sector of the future look like?

In neoclassical agricultural economics such structural change is discussed primarily in relation to microeconomic efficiency. The dominant perspective in explaining the economic efficiency of different farm sizes is returns to scale. Returns to scale reflect the relationship between average production cost and farm size. Production costs in agriculture stem from a variety of sources and activities. These include labour costs, costs associated with acquiring and making use of technology (mechanisation) and other production related inputs (Chavas 2001). Attention is given to capital costs, to costs emerging from taxes and regulation, and to costs associated with risk (Chavas 2001).

Following the neoclassical line of argumentation, farms of different sizes are assumed to possess varying, scale-related capacities and opportunities to generate returns from scale and to minimise production costs. In other words, depending on which types of costs are involved, either large, middle-sized or small farms will be seen to have scale-related comparative advantages. Chavas (2001) summarises the underlying line of reasoning as follows:

> *"Increasing (decreasing) returns to scale corresponds to an average cost (per unit of output) being a decreasing (increasing) function of output. And constant returns to scale means that average cost is unaffected by firm size. Alternatively, finding that larger firms exhibit a lower (higher) average cost identifies the presence of economies (diseconomies) of scale." (Chavas 2001: 267).*

Depending on which of the above-mentioned situations occurs, one will observe accordingly either a trend away from small-scale towards large-scale production or vice versa. If average costs are unaffected by firm size, we can expect to observe a persistence of the established structure. In certain contexts, the latter situation can result in the coexistence of large, middle-sized and small farms.

Importantly, returns to scale are not only responsible for choices regarding farm size — that is, whether a farmer decides to retain, increase or decrease the size of his farm — but also for exit and entry decisions (Chavas 2001). In other words, the neoclassical lens addresses both micro- and macroeconomic problems in the sense that global macroeconomic trends like the increasing intensification of agriculture or the steady decrease of the agricultural labour force appear as cumulative effects of microeconomic decision-making.

Empirical evidence from neoclassical agricultural economic research remains largely inconclusive as to which farm size is generally the most efficient in dealing with production costs and generating maximum scale returns. The literature also remains inconclusive regarding the related question as to what the "minimum efficient" farm size ought to be. Rather than providing a general answer, the literature instead indicates that scale-related comparative advantages and also minimum efficient farm size are both very much contingent upon contextual circumstances. Here, neoclassical agricultural economics suggests that the diversity of agrarian structures we encounter in different contexts can at least partially be explained by production costs and returns from scale. The literature, however, also acknowledges that part of the explanation lies in contextual circumstances which cannot be explained by the cost-function framing that dominates neoclassical economic analysis. Examples are transaction costs and market imperfections which, despite their being recognised as significant factors, nevertheless evade the explanatory power of the neoclassical approach. The neoclassic perspective therefore remains somewhat incomplete in its attempt to explain agrarian change, especially in cases in which — from a strictly neoclassical standpoint — these structures may appear to be economically inefficient.

A further argument against using neoclassical agricultural economics as the sole analytical framework to study agrarian change relates to its use of unrealistic core assumptions regarding market dynamics, in general, and the assumingly rational profit-maximising behaviour of economic actors in particular. Critiques of neoclassical economics point out accordingly that, while these core assumptions may help to successfully reproduce the neoclassical model, they fail to explain the real world as it is observed empirically (Eichner and Kregel 1975).

In neoclassical theory, economic actors are largely treated as socially disconnected "atoms" in a quasi-anonymous marketplace. This perspective disregards the role of social relations and social ties; it ignores reputation and trust, and it does not consider local behavioural

conventions and rules, i.e. institutions. However, especially in remote agricultural communities, social relations and ties are highly significant factors for explaining agrarian structures and rural livelihoods. Another related consequence of the limits to the neoclassical approach is that neoclassical economics tends to pay little or no attention to factors such as power, politics and culture; but if it does do so, than it does this only under the assumption that power, politics and culture are themselves the sole products of rational economic choices by self-interest-driven actors. Jarvis (1992) points to the commonly encountered problem in neoclassical scholarship of the "blind spot".

> *"Seeing the world as rational, particularly when peering through a neoclassical lens, is easy. [..] Remembering that an elegant neoclassical analysis of individually optimal choice is predicated on an ugly distribution of property is more difficult" (Jarvis 1992: 394).*

What follows from a consideration of these limitations is that to pursue an analysis of agrarian change, we need to complement neoclassical agricultural economics with theoretical concepts that recognise the relevance of social relations and ties as well as those of power, politics and culture as determinants of agrarian change, and (2) enable us to pursue context-specific analyses. Especially with regard to the first point, a range of sensible concepts are proposed in the field of Marxist agrarian political economy.

4.2 Marxist agrarian political economy

The questions addressed in the context of Marxist approaches correspond in part to those addressed by neoclassical agricultural economics. Marxist scholarship is likewise concerned with questions like what determines the development of a certain agrarian structure, what are drivers of change, how will the agricultural sector of the future look, and how can the development trajectory of the past be explained (Levien, Watts and Yan 2018). Against this backdrop, particular attention has been given to explaining how agriculture develops under capitalism.

Marxist approaches differ from the neoclassical perspective in that they study agrarian structure and change as a relational problem. Agrarian change is thus predominantly framed as the outcome of a distributional struggle within and between different rural classes, most notably between agrarian labour and landed property. Particular attention is given to the analysis of the context-specific configuration of material relations and their role in determining the distribution of benefit streams from agricultural output.

The configuration of material relations and its effect on the distribution of rents from agriculture are important in at least two ways. First, changes in existing material relations or

their consolidation are in many instances the core aim of state intervention in agriculture — i.e. the primary goal of agricultural reform. A typical example for an intended change in material relations would thus be any type of redistributive land reform. Second, material relations are a dominant force in shaping people's livelihoods and culture — the modus vivendi. Material relations are recognised as fundamental determinants of social structure and change in the sense that the configuration of these material relations determines the relative bargaining power of the actors involved. Material relations determine an individual's or a group's scope for action. Conversely, in other contexts, they may be the main explanation for an individual's or group's inaction, want of agency and lack of voice. Over and above this, material relations determine social standing, public roles and, to a certain extent, public perceptions of appropriate behaviour and entitlement.

A second fundamental aspect brought forward by the study of material relations, is the recognition of and emphasis on historical processes, and the political economy that shapes these processes. Material relations at a certain point in time are often explained by relational processes that have developed over longer periods rather than in a one-shot exchange. Other than suggested by the neoclassical school, agrarian change does not occur on a level — i.e. politically neutral — playing field. In contrast the configuration of the relations of production and reproduction, at a given point in time, are determined by historically grown asymmetries of power, skills and resource endowments. The configuration of the social relations of production and reproduction prior to state intervention in agriculture will thus have considerable effects on the path agrarian change will take in different contexts at different points in time. This latter point is important because it alerts and heightens one's sensitivity for the fact that agrarian change never occurs in an ahistorical, socially pristine environment.

In Marxist agricultural political economy, agrarian structural change centres on what can be described as two contrasting, but nevertheless interrelated dynamics — reproduction and differentiation. The persistence of a given agrarian structure, it is argued, ultimately rests on the farmers' ability to generate a minimum amount of revenue to "reproduce" their livelihoods through agricultural output. Bernstein (2010) defines the term reproduction as "securing the conditions of life and of future production from what is produced or earned now" (p. 18).

To explain success or failure in reproduction, Marxists focus less on the functions of individual costs and revenues (although one could argue that, in Marxian approaches these ultimately determine agrarian change as well) but rather on the processes of bargaining and bartering between the actors or, more precisely, the classes involved in the production process. The ability to grow, decrease in or to retain a certain size are thus not so much to be understood as primarily contingent upon the microeconomic skills or fortune of the individual farmer, but

rather on his ability to organize the balance of exchange in relations of production in a preferable way.

Differentiation denotes the sector-wide or, more precisely, the class-wide outcome of the cumulative successes and failures of farmers to reproduce their livelihoods based on agricultural output (Bernstein 2010). Following this line of argument, the Marxist view also contributes to our understanding of exit and entry decisions regarding the agricultural sector as a whole. Against this backdrop, scholars of Marxist agrarian change have shown particular concern for processes of mass exit from small-scale agricultural production. A dominant model used to explain this dynamic is that of depeasantisation, that is, the process by which scores of smallholders and landless rural labour exit agriculture in the wake of diminished livelihoods due to the "reproduction squeeze" (Bernstein 1977). Here, the farmer is basically confronted with increasingly unfavourable economic conditions of production. The reproduction squeeze, it is argued, results in a process whereby subsistence farming is abolished towards the end of commodifying and financialisation of small- and middle-sized agriculture (Bernstein 1977). While the farmers engaging in this altered economic environment do enjoy access to a cash economy and, compared to a subsistence economy, the opportunity to obtain surplus revenues, they simultaneously face a higher degree of economic risk and uncertainty due to their dependency on the market as well as constant pressure to refinance their investments. This latter aspect becomes increasingly relevant the more a farmer participates in agricultural intensification.

A third concept central to Marxian political economy is accumulation. Accumulation "refers to profit to invest in production (or trade, or finance) in order to make more profit" (Bernstein 2010: 124). Accordingly, accumulation occurs whenever returns from production outgrow the investment needs for reproduction. In an agrarian context, growth of agricultural holdings occurs when surplus earnings can be invested back into the operation, for instance, leasing or purchasing additional land or machinery. Growth also occurs in the context of depeasantisation, where farmers sell-off their property and leave the agricultural sector. The consequence of course is a concentration of landownership in larger holdings and further differentiation or an increasing gap between the landed class and landless labourers. What differentiates Marxist economic theory from neoclassical economics here is that the focus is on the relational dimension of agrarian change: the economic loss of some translates into the profit of others. Along those lines, Marxist theory also recognizes agrarian change as a source of social tension and conflict in rural areas.

It is generally important to point out that scholars who ground their works in Marxism cannot be subsumed under a single, self-contained school of thought. Rather, what is here referred to as Marxist agrarian political economy, comprises a vast number of historical as well as

contemporary works of authors from a wide variety of disciplines and theoretical backgrounds. This includes approaches which, in an orthodox sense, argue closely along the lines of original Marxist theory and which attempt to confirm this theory on the basis of theoretical debate and empirical observation.

Critics have pointed out repeatedly that the orthodox doctrine constantly struggles to explain phenomena which, theoretically, ought not to exist or which appear as major "anomalies". Two prominent examples of such phenomena which do not fit into the explanatory patterns of the orthodox doctrine are the continued existence of various forms of smallholder agriculture in capitalism and the persistence of "traditional" institutional agricultural arrangements such as bonded labour, serfdom, sharecropping, or chieftainship and other types of informal local authority.[14] Critics of the orthodox school of Marxist thought stress that, instead of extending or correcting the original doctrine, orthodox Marxism attempts to reinterpret these phenomena or simply to explain them away as exceptions to the rule.

Further criticism of orthodox Marxist approaches has been raised with respect to their traditionally narrow focus on the historic struggle between labour and capital, as well as to the notion that the relationship between rural classes is framed almost exclusively as antagonistic and conflict-laden. Yet, while class struggles may indeed be relevant in a lot of cases, by far not all interactions related to agricultural production can be explained as such. Furthermore, a narrow focus on class struggle also leads us to turn a blind eye to systems of mutual support and cooperation between rural actors who belong to the same "class". A considerable share of the interactions that occur in agricultural production are not between land and labour, or capital and labour, but between members of the same class, for example, when two farmers cooperate by sharing machinery or knowledge. What follows is this: Whereas neoclassical agricultural economics tends to be too little concerned with power, Marxist theory of agrarian change tends to overstate the role of rural conflict.

Orthodox Marxism's differentiation between rural classes is also problematic in the sense that, in reality, the boundaries between these classes are often much more fluid than the hypothetical ones proposed by simplistic Marxian binary distinctions between labour and capital, the landless and the landed, or rural peasantry and urban proletariat (Levien, Watts and Yan 2018). Beyond that, the framing suggested by orthodox Marxism runs the risk of overemphasising intra-class identification, solidarity and action to the point that rural actors are no longer perceived as individuals with agency, but instead as faceless units in a homogeneous mass.

[14] For discussions of the persistence of bonded labour and serfdom in different parts of the world, see e.g. Robert Miles (1991), Tom Brass (2008), Özgür Teoman and Muammer Kaymak (2016). For discussions on the persistence of sharecropping, see e.g. Çağlar Keyder (1983), Joseph E. Stiglitz (1986), Stuart Oglethorpe (2014). For discussions on the persistence of chieftainship and other forms of informal local authority, see e.g. Christian Lund (2008, 2011), Kate Baldwin (2015), N. T. Håkansson and Mats Widgren (2016).

Finally, orthodox Marxist political economy has been rightfully criticised for its deterministic and historicist model of social change — historical materialism. Empirical evidence such as the aforementioned observation that smallholder agriculture persists even in today's globalised capitalism — often side-by-side with large-scale industrialised farming —suggests accordingly that the stages of development assumed under an orthodox Marxian view do not hold up to scrutiny: that is, they do not explain agrarian structural change in the past nor do they account for it in future.

Like some mainstream neoclassical scholars have done in relation to neoclassical agricultural economics, many Marxist scholars have devoted considerable energy to continuously reproducing the assumptions of the Marxist model of social change. Rather than attempting to re-evaluate and further develop this model — if necessary, abandoning or replacing it — orthodox scholars have tried to fit counterintuitive empirical findings to it. The result is that, like mainstream neoclassical agricultural economics, orthodox Marxist agrarian political economy tends to limit our analytical capacity if it is used as the sole theoretical framework.

In contrast to this often self-limiting orthodox position, today there is also a wide range of studies which attempt to deal both critically and constructively with the original Marxist teachings. Works from this more critical group integrate theoretical approaches from numerous other fields, including feminist theory (e.g. Barrett, Michele 1988; Agarwal 1994; Deere 1995; Arruzza 2016), development studies (e.g. Mosse 2005; Li 2007; Ferguson 2013; Li 2014) or political ecology (e.g. Ribot and Peluso 2003; Peluso 2009). Authors from this more critical group nevertheless share a number of assumptions with the orthodox school of Marxism. Both strands conceptualise capitalism accordingly as "a historically specific and contradictory mode of production that systematically produces class inequality and crises, and conditions state forms and politics" (Levien, Watts and Yan 2018: 858). However, heterodox or neo-Marxist schools of thought follow the premise postulated by Michael Burawoy (1990) that theoretical traditions only maintain their explanatory power to the degree that they are reconstructed with a consideration of anomalies. "Scientists", Burawoy argues "should not be frightened by anomalies, but should seek them out, because it is anomalies that drive a research program forward" (Burawoy 1990: 778).

The comparatively greater openness implies that heterodox or neo-Marxist approaches examine agricultural structural change as complex and context-bound while, at the same time, keeping an eye on the traditional core questions of Marxist theory. Henry Bernstein is one of the most prominent scholars from the group of contemporary authors who seek a constructive dialogue within the various currents of orthodox and heterodox Marxist agricultural economics. In addition to promoting a differentiating debate and his striving for a further development of Marxist concepts, Bernstein also points to commonalities in the sense of an

overarching research programme. In his publication "Class Dynamics of Agrarian Change" (2010), Bernstein thus formulates a catalogue of questions that can serve as a guideline for a Marxist-oriented analysis of structural change in agriculture. He introduces the following four fundamental research questions: (1) Who owns what? (2) Who does what? (3) Who gets what? (4) What do they do with it? Bernstein specifies these questions as follows.

> *"The first question, who owns what?, concerns the social relations of different property regimes, i.e. how the means of production and reproduction are distributed. The second question, who does what?, is concerned with the social division of labour, i.e. who performs what activities of social production and reproduction. The third question, who gets what?, is about the social division of the 'fruits of labour'. The fourth and final question, what do they do with it?, refers to the social relations of consumption, reproduction and accumulation" (Bernstein 2010: 79).*

The four research questions are essentially suited to study any agrarian context. Bernstein thus emphasises that the "sites and scales of application of these questions extend from households to 'communities' to regional as well as national and global economic formations" (Bernstein 2010: 79). What the questions and their associated concepts do not provide is a well elaborated analytical framework for the analysis of agriculture as a distinctive type of economic activity. Bernstein acknowledges and tries to address to this problem by supplementing the basic questions with what he denotes as seven "coordinates" of the conditions of agrarian production (Bernstein 2010: 80):

(i) natural/environmental conditions of farming,

(ii) productive forces or "powers of labour", comprising the instruments of labour and knowledge applied in farming (and the wider culture that generates them),

(iii) how access to land (the object of labour) and the tools for working it (instruments of labour) are organised,

(iv) how the labour processes of farming are organised,

(v) claims on the products of farming, and how they are distributed and used for purposes of social reproduction (and accumulation),

(vi) the productivity of farming, in terms of both of land and labour, and

(vii) the size/density of population that farming can support.

While Bernstein proposes to use these coordinates as "elementary building blocks for conceptualizing and considering any set of agrarian processes and the social relations through which they take place" (Bernstein 2010: 80), he also warns us that relying on these coordinates alone will do "considerable violence to the specificities, complexities and contradictions of historical processes and experiences and responses to them" (ibid.).

The Marxist view helps us identify a number of potentially relevant action arenas and it offers a fitting terminology to discuss and communicate the dynamics of agrarian change. In the context of this work, Marxist agrarian political economy therefore provides an important supplemental perspective to that offered by neoclassical economics. At the same time, however, Marxist theory does not provide us with a well-elaborated set of analytical concepts to pursue analyses of agrarian change in practice. Sensible approaches in this respect can be found, in particular, in the study of institutional economics.

4.3 Economic theories of institutional change

Theories of institutional change were developed in different social science disciplines such as political science, sociology or economics. As a result, there are a number of different definitions of what an institution is, as well as many different approaches to explaining the role of and changes in institutions. Institutional perspectives are applied to the analysis of countless forms of social and economic interaction, including the analysis of agricultural structural change.

Similar to both the orthodox and the heterodox strands of Marxist agricultural political economy, institutional theory has a strong relational focus. However, unlike Marxist theory, institutional theory offers a much larger and more differentiated repertoire of explanatory approaches to the question of how and through what means production relations are organised, regulated, and sanctioned. Furthermore, there is a whole range of theories of institutional change, which offers explanatory approaches to the question of how these relationships change over time.

Following Kingston and Caballero (2009), I introduce some ideas from institutional change, which are relevant for the object of this investigation. As noted in the introduction to this study, a comprehensive description and critique of all existing theories of institutional change is not the objective: rather, the discussion aims to show the contribution of different theories of institutional change to the analysis and understanding of the changes in agricultural structures described in this research.

4.3.1 Defining institutions

As indicated above, there are a number of different definitions of what an institution is. The present work adheres to Douglass North's definition of the term, who defines institutions as

> *"the rules of the game in a society or, more formally, the humanly devised constraints that shape human interaction. They are made up of formal constraints (e.g. rules, laws, and constitutions), informal constraints (e.g. norms of behaviour, conventions, and self-imposed codes of conduct), and their enforcement characteristics. In consequence, they structure incentives in human exchange, whether political, social, or economic" (North 1990: 3).*

At its core, North's definition postulates a set of assumptions that are shared by many institutional theories. In their capacity as social norms and associated sanctions, institutions make human interactions to a certain extent expectable. Institutions provide information about which actions are "allowed" in a given situation, as well as which actions the given institutional arrangement disallows or deems undesirable. As a result, institutions offer the participants both a kind of orientation and a certain degree of security about future events. Institutions therefore both restrict *and* enable human actions (Ostrom 2005).

There are important differences, however, between the various definitions and these concern the questions of what kind of rules fall under the concept of institution and how these rules arise, work and change in detail. Against this backdrop, is a recurring discussion that concerns the distinction and role of formal rules as opposed to informal ones. Formal rules are sometimes simply understood as rules laid down in laws or similar official frameworks, while informal rules are established, for example, at the level of oral agreements or locally traditional conventions and norms. The effectiveness of various rules is not necessarily dependent on their form; this means that, in relation to a given context, either formal rules and or informal conventions can determine action. Against this backdrop, are a large number of publications devoted to the phenomenon of legal pluralism in which, to put it simply, different rule systems exist in parallel. This is a circumstance that can open up leeway but, at the same time, it can also lead to institutional inertia (Merry 1988; North 1990; Benda-Beckmann 2002; Lund 2006; Benda- Beckmann and Benda-Beckmann 2006).

In connection with the role of existing sets of rules, we must therefore also ask whether and to what extent these sets of rules are actually applied as rules of conduct or not. Ostrom (2005) proposes a distinction between rules in form and rules in use, whereby the former remain without influence but the latter represent the set of rules actually institutionalised in practice (Ostrom 2005). The rules in use can include conventions that are laid down in the law, "in black and white", as well as rules that exist only at the level of oral agreements, local customs

and norms. Following a similar logic, Sugden (2005) explicitly defines institutions as behavioural equilibria, that is, stable behavioural patterns for a given period of time.[15]

Another differentiating discussion concerns the question of whether institutions have the same binding force and effectiveness for all actors involved in a social interaction. The binding character of rules thus depends to a large extent on actors' relative social positions, that is, an actor's social position will determine whether or not he/she must follow rules strictly or be given a far more generous scope for action. This would mean that for some a given institution may be a guiding principle or a dictate, while for others it remains irrelevant.

North's definition of the institution as a set of humanly devised constraints that shape human interaction indicates that institutions may have a possible dual role in the context of agricultural structural change. Altered or new institutions can be understood therefore as a reaction to an ongoing or already completed structural change. But the driving forces of structural change can be very diverse. Possible options include the development of new and affordable technologies, a shift in the demand for agricultural goods, or an improvement or deterioration in the fertility of agricultural land. New institutions may themselves be drivers of various forms of structural change. For example, social innovations could enable or force agricultural actors themselves to re-organise practices or aspects that otherwise may have not been apparent to them, thus allowing them to abandon traditional production patterns in favour of new, more efficient methods.

Analogously to the aforementioned varieties of definitions proposed for institutions, the literature also offers a plethora of theories to explain institutional change. A worthwhile entry point to a discussion of these different approaches is once again provided by Kingston and Caballero (2009) who differentiate between collective-choice theories of change, on the one hand, and evolutionary theories of change, on the other.

4.3.2 Collective-choice theories

Kingston and Caballero (2009) argue that collective choice theories

> *"treat institutional change as a centralized process in which rules are explicitly specified by a collective political entity, such as the community or the state, and individuals and organisations engage in collective action, conflict and bargaining to try to change these rules for their own benefit" (Kingston and Caballero 2009: 4).*

[15] For a discussion of interpretations of institutions either as rules or equilibria, see e.g. Avner Greif and Christopher Kingston (2011) and Arild Vatn (2005).

The authors mention Gary Libecap and Elinor Ostrom as two particularly influential representatives of the collective-choice position. Libecap (1989) explains the development and change of property-rights rules as the outcome of a bargaining process between individuals or groups with a stake in one or several economic transactions. For the actors involved, the rationale to engage in what Libecap (1989) refers to as "contracting for property rights" is that the configuration of property rights entails distributional consequences in terms of the actors' access to the benefit stream from the transaction. Contracting for property rights by way of bargaining, political action or lobbying serves accordingly to ultimately establish a configuration of property rights that maximises the benefits to be obtained by the rights holder.

In cases where competing claims for the benefit stream are involved, the contracting becomes a struggle between different interests. The competitive character of this contracting process becomes even more obvious when one considers that, apart from granting access to a benefit stream, the property-rights rules often also define costs and duties associated with a transaction. Contracting for property rights therefore also involves bargaining for favourable conditions with regard to which of the transacting partners must carry the costs and duties.

Libecap (1989) views the contracting for property rights as a hierarchical multilevel process in that higher-level political rules set a frame that demarcates the legal — and normative — scope in which changes in property rights on lower levels will eventually occur. Libecap regards changes to exogenous parameters as the main impetus for institutional change.

Ostrom also proposes a hierarchical theory of institutional organisation and change. Here, institutions are understood as part of a multilayered system of rules in which the rules that govern day-to-day interactions ("operational rules" are nested in a hierarchy of higher-level rules, comprising "collective-choice rules", i.e. the rules governing the selection of operational rules, as well as "constitutional" and "meta-constitutional rules", i.e. rules governing the selection of collective-choice rules) (Ostrom 2005).

Ostrom (2005) describes the process of institutional change as one in which an individual or a group calculates the costs and benefits from a change in the rules compared to retaining the status quo. As in Libecap's theory attention is focussed on the distribution of benefit streams as well as who must ultimately shoulder the costs associated with economic transactions. Once a critical mass of actors considers a proposed change in the rules to be beneficial, a coalition will form, having as its goal the collective decision for institutional change. Higher-level rules are here seen as a (momentarily) stable reference for changes that occur among rules at a lower level. Like Libecap, Ostrom also argues that the relation between higher- and lower-level rules means that higher-level rules determine what kinds of changes are possible in lower-level rules and also how different forms of collective action affect these changes.

Based on these assumptions, Ostrom (2005) accounts for the fact that higher-level rules can also change over time. Under most circumstances, however, the pace or frequency of change tends to be much slower for higher-level collective choice and constitutional rules than it is for day-to-day operational rules. Higher-level rules themselves can function as an impetus for change. In contrast to Libecap who generally assumes exogenous parameter changes as the main impetus for institutional change, Ostrom (2005) proposes that institutional change can be driven by both exogenous factors (like technological change) and endogenous factors (like the depletion of a resource).

The discussion so far shows that the works of Gary Libecap, Elinor Ostrom and other representatives of collective-choice theory offer a number of important approaches to studying and explaining institutional change at different levels and over different time horizons. However, a limiting aspect to these theories, at least with respect to structural change in agriculture, is their primary focus being on centralised collective decision-making processes as arenas of institutional change. Ostrom's achievement lies particularly in explaining collective decision-making processes in the context of common-property regimes. While common-property regimes still play an important role in developing countries, such arrangements are only rarely observed in agriculture in the so-called developed world where individual private-property regimes tend to be the norm. But a number of other situations and arrangements exist in which institutional change in agriculture is centralised and carried out collectively. For example, one conceivable scenario would be a change in the rules within an agricultural cooperative or the activities of agricultural interest groups at the political level. However, it is precisely at the level of operational rules that we find ourselves far more frequently in the context of decentralised, individual decision-making in agriculture. In contexts such as these, evolutionary theories of institutional change may be a more effective alternative to the approaches we have just discussed.

4.3.3 Evolutionary theories

I now turn to a discussion of evolutionary theories of institutional change. Evolutionary theories view institutional change as a process

> *"in which new institutional forms periodically emerge (either at random or through deliberate design), and undergo some kind of decentralised selection process as they compete against alternative institutions. Those institutions which prove successful at surviving the selection process spread by imitation or replication, while unsuccessful institutions do not. As a result, overall institutional change occurs 'spontaneously' through the uncoordinated choices of many agents, rather than in a centralised and coordinated manner" (Kingston and Caballero 2009: 2).*

As such, evolutionary processes of institutional change satisfy core Darwinian evolutionary principles of variation, selection and inheritance (Hodgson 2010).

An interesting example of the assumption of institutional change controlled by evolutionary dynamics can be found in Oliver Williamson's transaction cost theory (Williamson 1981). In Williamson's approach, transaction costs arise primarily as a result of bounded rationality and opportunism on the part of the transacting partners. The parties involved in a transaction are therefore interested in designing the transaction in such a way that associated costs are minimised. An important way to reduce transaction costs is to introduce or change institutional arrangements, in Williamson's terminology, governance structures. The development, application and modification of such governance structures is based on a trial-and-error logic, whereby the real transaction costs that arise from an arrangement which is undergoing practical testing act as a criterion for further institutional change. In other words, institutional change is a selection processes induced by costs.

Governance structures do not develop randomly, but as a result of a conscious attempt at institutional design. However, the development is mostly decentralised and driven by individual actors. Individual, successful governance structures can be long-lived and widely used. However, the process of dissemination does not take place through collective decision-making as described above. Instead, it happens in accordance with Darwinian evolution theory — that is, as a result of imitation and learning on the part of other actors confronted with the same or a similar transaction. Meanwhile, the focus on transactions is also methodologically goal oriented, especially in cases where we are interested in institutional change at the level of operational rules.

Another example of an evolutionary perspective on institutional change is given in Thorstein Veblen's work. Veblen understands institutions as "prevalent habits of thought with respect to particular relations and particular functions of the individual and of the community" (Veblen 2000: 88). Institutions are thus primarily individual or collective convictions that translate themselves into corresponding behaviour which can then be regarded as institutionalised. Veblen understands institutional change as follows: "the evolution of social structure has been a process of natural selection of institutions" — that is, a process of "natural selection of the fittest habits of thought" (ibid.: 87), both through the "selection of individuals endowed with the fittest temperament" (ibid.: 87), and through the "adaptation of individual temperament and habits to the changing environment through the formation of new institutions" (ibid.: 87). On Veblen's understanding, the change in habitual — i.e. institutionalised — behaviour occurs as a consequence or, rather, in a co-evolutionary interplay with changing convictions.

Friedrich Hayek combines evolutionary and collective-choice theories. He describes situations in which different social groups develop new institutional arrangements as collectives in parallel, independently of each other, and uncontrolled (Hayek 1973). Institutional arrangements often develop spontaneously. Aggregated to the level of society as a whole, this results in a social (institutional) order that is constantly in developmental flux. Thus a form of uncontrolled selection, in the Darwinian evolutionary sense, takes place. Hayek's (1973) assumption is therefore quite important: namely, that the process of institutional genesis and selection over time leads to continuous improvement in the social system of rules towards a kind of optimal configuration.

4.3.4 The role of the state in institutional change

In the context of collective-choice theories, the role of the state in institutional change is also discussed (Alston 1996). The democratically elected state bodies can be understood as collective of decision-makers that is decisive for institutional change. To return to Ostrom's terminology, it can be assumed that, at the level of the state, institutions in particular are negotiated and changed through collective choice and constitutional rules. It can also be assumed that, at state level (mostly, if not exclusively), formal legal rules, Ostrom's so-called rules-in-form, are adopted. But whether these rules-in-form translate into rules-in-use after their adoption depends on whether they represent a cost–benefit gain or loss for the citizens concerned, and whether the state has sufficient means to enforce them.

Depending on the analytical focus, the state or state bodies themselves can be observed as collective decision-making entities. In cases where institutional change is observed at local or civil-society level, the decisions of the state or of one of its agencies can be understood as an exogenous impetus for change. In fact, depending upon citizens' respective social positions and their degree of organisation, civil society can have very different degrees of direct or indirect influence on rule changes at the level of the state. For the majority of a given population, state action therefore represents an exogenous change in the basic framework under which social interactions can take place. A possible reaction to this would be the adaptation of the institution at the level of operational rules and/or local collective-choice rules. Apart from providing the exogenous impetus for local-level institutional adaptation, the state here also assumes the role of enforcer and protector of local-level collective decisions.

4.3.5 Institutional persistence and path dependency

In the collective-choice theories discussed, the persistence of institutions is explained primarily as the consequence of a (bounded) rational cost–benefit analysis by the actors involved. In this case, the existing institutional arrangement regulates social interaction with

comparably high efficiency. As long as neither the exogenous nor the endogenous framework of social interaction change, there is no incentive for the actors involved to initiate institutional change.

Another factor that influences institutional persistence as well as the speed and trajectory of change is path dependency. The connection between rules of different order described in Libecap as well as in Ostrom's framework indicates that, in many cases, institutions are the result of path dependencies. David (1994) speaks of institutions as "carriers of history".

On the one hand, the effect of path dependencies can be described as an unconscious and automatic process in which already established institutions and physical infrastructures "predefine what is imaginable". However, in accordance with the cost–benefit logic of collective-choice theories, path dependencies are primarily a consequence of the fact that established physical infrastructures would make the introduction of fundamentally different institutions prohibitively more expensive. Here, path-dependent institutional change is the result of a conscious reproduction, and possibly even defence and protection, of the established system by collective decision-makers. Instead of path dependency in the stricter sense, one could also speak of path creation. This means that some institutional arrangements will be preserved over long periods of time, even though they may be economically inefficient or even socially unjust compared to alternative approaches, just because there is no impetus to change them.

The persistence within established paths explains not only in which direction institutions typically develop, but also why under certain circumstances no change occurs (David 1985). Under certain circumstances, path dependencies definitely represent an obstacle for institutional change.

4.3.6 Institutional change and power

Another important aspect of institutional change is the role of power in the context of collective decision-making (Knight 1997 and Cook and Levi 1991). The influence of power is relevant at different levels. For example, collective-choice and constitutional rules formally equip some actors with varying degrees of decision-making power, while other actors may have no or significantly less decision-making power. On the one hand, this power can include the right to change operational rules; on the other hand, the decision-making power can also include rights to change collective-choice or even constitutional rules. The way in which institutions equip individual actors or groups of actors with varying degrees of power and profit is best explained by Elinor Ostrom's definition of the term institution.

> *"An institution can be defined as the set of working rules that are used to determine who is eligible to make decisions in some arena, what actions are allowed or constrained, what aggregation rules will be used, what procedures must be followed, what information must or must not be provided, and what payoffs will be assigned to individuals dependent on their actions" (Ostrom 1990: 51).*

In addition to this power, formally conceded on the basis of institutional arrangements, forms of power that derive from other sources such as social capital, wealth or a monopoly of force are also relevant. For example, in a case where different preferences exist as to whether or how an existing institutional arrangement should be changed, different endowments of the actors with social capital, prosperity or the possibility to use coercive force can lead to the more powerful party or group asserting him-, her- or itself in their own favour in the decision-making. This can happen either by the more powerful actors themselves directly deciding on and enforcing institutional change, or by powerful subordinates exerting influence on superordinate decision-makers, for example, in order that the latter change collective-choice rules in favour of the former.

If institutional change is explained accordingly as the result of a (bounded) rational cost–benefit analysis by the actors involved, it is important to point out that, in many cases, institutions reflect the cost–benefit analysis of dominant actors or groups, but not an optimal cost–benefit calculation for all of the actors. In some cases, institutions can be the consequence, manifestation and also guarantor that the power position of dominant actors persists. The same applies, conversely, to the position of comparatively weaker actors. Here, too, the institutional arrangements to be found at a given point in time are equally a consequence of, an expression of and a future consolidation of the marginalisation of these actors.

4.4 Summary

Sections 4.1, 4.2 and 4.3 presented different approaches to explaining structural change in agriculture, coming from three major schools of thought: neoclassical agricultural economics, Marxist agrarian political economy and economic theories of institutional change.

Neoclassical agricultural economics explains agricultural structural change primarily as a consequence of the relationship between production costs and profits from the sale of agricultural goods. Structural change occurs when actors active in agriculture try to reduce production costs through structural adjustments and thus achieve the greatest possible profits. Depending on the circumstances, the adjustments can lead to an intensification and expansion of production, or a strategic and/or forced reduction of production. Neoclassical theory basically assumes completely rational profit-oriented actors.

In contrast to neoclassical theory, the school of Marxist agrarian political economy pursues a more relational approach. Agricultural structural change is primarily described as the result of an often conflict-laden negotiation process among the actors involved in the production process. To put it simply, the central conflict is about how the costs and profits from the production of agricultural goods are to be distributed. Depending on how the distributional conflict is settled, either opportunities or pressures of structural adjustment arise. A particular focus here is on the relationship between farmworkers on the one hand and landowners on the other. But other types of relationships relevant for the agricultural sector can also be viewed through the Marxist lens and described accordingly: for example, the relationship between small farmers and large landowners, or the relationship between farmers and middlemen, or that of trade upstream and downstream of production. In the Marxian sense, the outcome of these negotiation processes is a function of the relative bargaining power of the individual groups of actors.

Institutions have been described as powerful means of organising various types of interpersonal relationships and interactions. An analysis of existing and changing "rules of the game" therefore helps us to understand how a sector or individual processes work and function. Theories of institutional change are therefore an important perspective for our understanding of structural change in agriculture. Collective-choice theories and evolutionary theories allow us to describe different forms of institutional change in different contexts. Depending on the context, institutional change can either emerge from a central collective-choice process or as a result of decentralised evolutionary development.

Theories of institutional change also provide a number of approaches to addressing questions that arise in neoclassical theory and Marxist theory, which otherwise may remain unanswered. In the context of neoclassical agricultural economics a recourse to an institutional perspective allows, for example, the explanation of market failures, transaction costs, or seemingly irrational behaviour of economic actors. In the context of Marxian questions, however, institutional approaches offer effective concepts to explain in detail and context-specific the distribution of costs and profits from agrarian production — a notion that is central to Marxist theory, as illustrated in the work of Libecap, Ostrom and many others on property rights.

What we can see from the above discussion and this summary is that the three schools offer a whole range of meaningful perspectives and explanatory models for agrarian structural change under sometimes very different circumstances. Taken on their own, each of the schools contains relevant and interesting perspectives and approaches, but also conceptual limitations. Bringing these approaches together, an analytical framework can be created that is both more flexible and more holistic. The attempt to establish this analytical framework will be the task of the following subsections.

4.5 An analytical framework for studying agrarian change

This section describes the analytical framework that I developed for this study. I establish connections between the basic research question and the object of investigation, and lay out a possible theory to explain agrarian change. The analytical framework thus serves to orient or guide the empirical fieldwork by delineating the object of investigation and identifying relevant aspects for answering the research question. Ostrom's institutional analysis and development (IAD) framework represents a "multitiered conceptual map" which allows the researcher to zoom in to particular parts of the hierarchy of institutionalised interactions in an established social system (Ostrom 2005). A carefully developed analytical framework based on theory can also aid a continuous revision of hypotheses and explanation of observed phenomena. Thus a sound analytical framework should provide orientation, present hypotheses and offer explanatory approaches.

4.5.1 Frameworks for the analysis of social–ecological systems

Agricultural structural change is a long established research topic. It is therefore possible to draw on already existing frameworks to develop an analytical approach for this study. The institutional analysis of social–ecological systems in particular is a field that offers tried and tested analytical frameworks in research practice.

Of particular importance are the IAD mentioned above and the social–ecological systems (SES) framework developed by Elinor Ostrom and colleagues for the investigation of collective-action institutions in human–environment relations (Ostrom 2009). The IAD provides a framework for the design and evaluation of institutional arrangements for a wide variety of coordination problems in social–ecological systems, such as the joint use and management of different kinds of natural resources or the handling of resource degradation and pollution. It focusses on how "rules, physical and material conditions, and community attributes shape action arenas and the incentives faced by individuals, and hence how these conditions combine to determine outcomes" (Ostrom 1998: 68).

The SES attempts to make the complexity of social–ecological systems tangible and observable by including a large number of variables. It starts from the question of under which circumstances these complex systems are used sustainably and under which ones not (Ostrom 2009). The SES is also an attempt to respond to the assessment that previous explanatory approaches tended to be limited with regard to disciplinary boundaries and possible research questions (ibid.).

Ostrom's work and her analytical frameworks are specifically designed for the analysis of collective action in common-property regimes. Against Garret Hardin's "swan song" criticism

of common-property systems, Ostrom's contribution demonstrates that the commons can be sustainably managed depending on the institutions of collective action. Common-property systems are present in many social–ecological regime contexts. However, in nature-related sectors, to which agriculture belongs, a large part of the production processes is organised through non-collective arrangements.[16] The same applies to a majority of the processes upstream and downstream of production, e.g. the provision of inputs or the processing and marketing of outputs. The analysis of such contexts requires an analytical framework that is tailored specifically to an agrarian setting. An approach that is particularly useful here is Konrad Hagedorn's institutions of sustainability (IoS) framework (Hagedorn, Arzt and Peters 2002).

4.5.2 Adjusting the IoS to the study of agrarian change

The IoS shares some key conceptual assumptions with the frameworks of the Ostrom's school and others in the field of institutional economics. Further, the IoS develops an independent perspective that predestines it specifically for the analysis of structural change in agricultural contexts. The conceptual and perspective openness of the IoS framework allows it to combine both deductive and inductive approaches. In addition, the IoS allows us to zoom into individual aspects depending on the research interest and thus to address specific questions. Finally, the great advantage of the IoS compared to other established analytical frameworks lies in its focus on non-collective forms of social interaction. These characteristics make the IoS a useful starting point for the development of an analytical framework for the research carried out in this study. In what follows, I will integrate the research interest of this study and the theoretical approaches discussed in the previous chapter into the IoS.

The IoS is particularly concerned with the question of within which institutional arrangements and governance systems can transactions in agriculture and in other nature-related sectors be organised sustainably. Accordingly, important questions are which types of transactions are associated with high internal and external, negative environmental effects, whether alternative approaches are available and under which circumstances the actors involved have the room to manoeuvre in order to change their behaviour. An important criterion for achieving environmentally sound production patterns is the development of a regime of integrative institutions and governance systems that are coherently aligned with the characteristics of the transactions.

[16] The dominance of individually organised over collectively organised production described here is particularly found in the so-called Global North, e.g. in Europe and North America. In the so-called developing countries, this relationship may be far less clear.

The IoS framework allows us to study local and regional coordination between agriculture, other nature-related sectors and the environment. At the centre of the approach is the identification of actors' characteristics, transaction features, and the types of property rights as well as other institutions and associated modes of governance (Ehlers 2017; Hagedorn et al., 2002). The context-specific characteristics of actors, transactions, property rights and other institutions and the related governance structures influence the change or maintenance of institutions (Ehlers 2017). This influence is described in the IoS as institutional innovation (figure 1). Conversely, the IoS also facilitates the analysis of the effects of these institutions on other institutions, transactions, actors and governance structures. This influence is referred to as institutional performance (figure 1).

Because this work focusses on the social and economic effects of agricultural structural change, it is necessary to adapt and interpret the IoS accordingly and appropriately. From an environmental point of view, these changes can be positive or negative. However, a case of massive and sudden intensification, as observed in this study, is rarely associated with improvement, but rather with increased pressure on natural resources.

To reiterate, the IoS is adapted to the specific object of research presented in this study. Slightly longer explanations are provided regarding the interpretation of the two building blocks, actors and action arenas. Another category that is addressed, although not specified in the original IoS, is the role of the state as an exogenous driving force of local and regional change. The other IoS building blocks — transactions, institutions and governance structures — are considered no less important for my work; but since I am orienting myself largely on Hagedorn's established definitions, these other categories require only a shorter explanation.

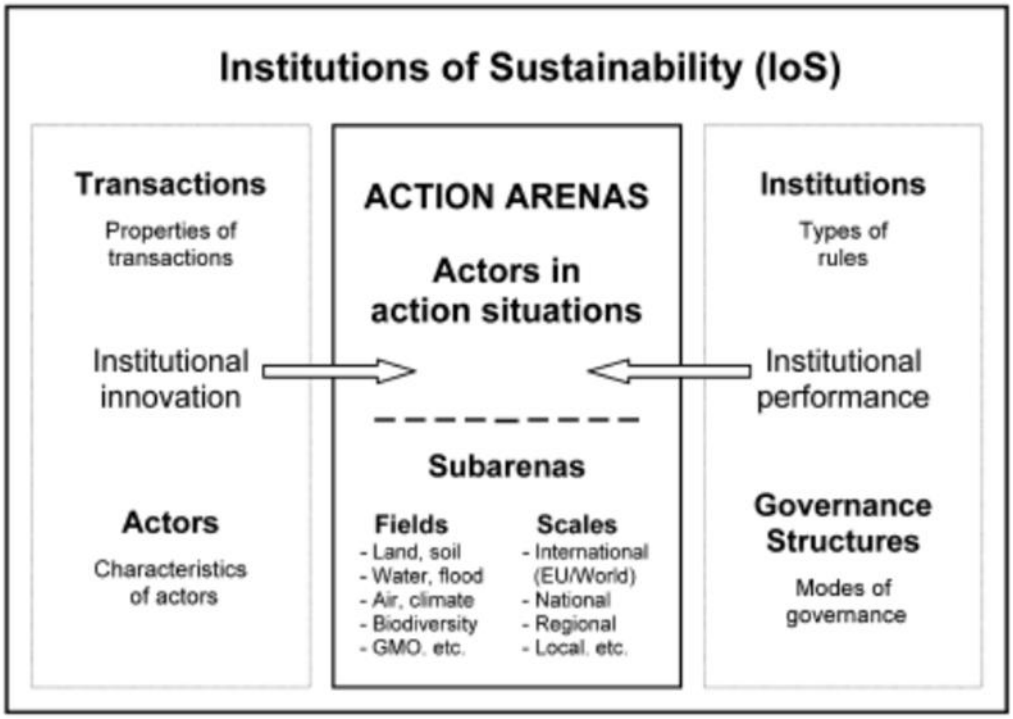

Figure 1: The Institutions of Sustainability Framework[17]

With respect to transactions, it is assumed that the majority of those observed in this research must be counted as nature-related and that a specific view of structural-change dynamics emerges from this. With respect to institutions, it is assumed that the social relations of production and reproduction in rural areas are regulated by a multitude of formal and informal arrangements. To reiterate, institutions are understood to be limiting as well as enabling factors for human action. Depending on the context, institutional change can be explained either on the basis of evolutionary theories or on the basis of collective-choice theories. With regard to the role and design of governance structures, it is assumed that a large proportion of local transactions, such as those between neighbouring farmers, are organised on the basis of informal contracts and/or through local markets. Transactions, on the other hand, that are associated with high costs, I hypothesize, are often organised on the basis of informal social networks. Formal types of cooperation, such as farming cooperatives, play only a minor role.

Actors. The IoS allows us to investigate a wide range of actors and constellations of actors active in the agricultural sector. This means, depending on the research interest, the focus can be, for example, on the relationship between two neighbouring farmers, the relationship between family members on a family farm, the relationships between farmworkers and landowners, or between farmers and representatives of the agro-food industries upstream and downstream of production. Finally, the openness of the concept of actors also permits

[17] Source: Hagedorn (2008).

inductive adjustments to be made during the course of the empirical work, for example, those cases wherein important actors for understanding the object of investigation only come to light in the course of research activity.

Hagedorn's concept of the actor also encourages us to pay attention to specific characteristics and attributes of the actors involved and to consider these characteristics and attributes as factors influencing the preferences and behaviour of these actors in the analysis. For the identification of such characteristics, Hagedorn and Gatzweiler (2002) propose the following grid (p. 12)

(i) values and beliefs of the actors and their particular attitudes and perceptions of agroenvironmental issues;

(ii) reputations for reliability and trustworthiness are important for the credibility of their commitments;

(iii) resources for influencing agroenvironmental strategies at the regional and local levels, i.e. by direct participation;

(iv) resources for influencing political decision-making at higher than the regional level, in which land users cannot participate directly;

(v) information and knowledge, and capacities for acquiring, processing, retaining and using knowledge and information; asymmetric information;

(vi) actor's method of action selection: maximising homines oeconomici, constrained maximisers with bounded rationality, or fallible learners; and

(vii) social environment and embeddedness of actors in communities and cultures.

Concerning agricultural actors, relevant to our research question is whether specific characteristics and/or behaviours can be assigned to them. Further, it is crucial to ask whether such characteristics and/or behaviours can be regarded as important or determining factors for structural change. Hagedorn's grid provides some important clues here. In this research human behaviour is understood as a consequence of bounded rationality, that is, a contextually tied "logic of appropriateness" in the sense of March and Olsen (2004), and related to personal motives, including social and cultural considerations, above and beyond purely economic gain.

Nevertheless agriculture is an activity characterised by economic motives. The development of supply and demand as well as price signals and cost structures, which are the primary focus of neoclassical agricultural economic theory, are undoubtedly important driving forces of individual behaviour and agricultural structural change in general. They will therefore be taken into account in this work. However, the decisions and behaviour of the actors are understood, rather, as being embedded in and influenced by a complex network of norms and motives.

In addition, we must also consider whether characteristics can be determined which are "typical" for agrarian actors. However, we must not succumb to the temptation of assuming fixed, ideal-typical — stereotypical — characteristics, behaviour patterns and preferences of "the peasantry" or "the large landowners", etc., as is done not infrequently in the class thinking of orthodox Marxist theory. In this research it is assumed that working and living in a rural area dominated by agricultural activity forces actors into specific roles and behaviours, which may then appear as patterns. In other words, actors find themselves in external circumstances that consciously and unconsciously influence their preferences and behaviour. Respectively, Hagedorn's approach of nature-related transactions discussed above offers some important indications as to which basic social–ecological conditions have to be considered in the context of agriculture and how these can influence both the scope for action and the means available to the actors.

Important for the underlying research question is also to consider the sensitivity of the Marxist perspective to the dynamics and relevance of the rural power structure. With regard to the distribution and implications of political power and other resources that can be translated into power, such as money or landownership, the rural population does not appear to be a homogeneous mass. Instead, given the power and resource differences between rural actors, different actors can have very different options for shaping the situation. Depending on personal resources and social position, it is therefore conceivable that some actors in rural areas can react very flexibly and effectively to external changes, or that they can even act as architects of change. Conversely, other actors may be directly and indirectly at the mercy of external changes due to these individuals' lack of resources or low social standing. As I stressed in the introduction to this work, agency is thus understood to be situated, that is, each actor's scope for action as well as his or her consequent behaviour is determined to some degree by a pre-existing system of social constraints, including institutions and customs or the distribution of resources and political power.

A further perspective in focus is that relationships between such differently positioned actors may be characterised by divergent interests which, in turn, can result in conflict. Diverging interests may be present, for instance, in the context of negotiations over labour contracts

between landowning farmers and landless wage labourers. Again the distribution of power plays a decisive role for the terms under which such conflicts will be settled. The analysis of inter-class conflicts is at the heart of Marxist political economy. But beyond the need to reflect on inter-class conflicts, this study also stresses the relevance of diverging interests and conflicts between members of the same class, within the same local community and even within a single family in the context of agrarian change.

Institutions. Hagedorn's (2008) understanding of the properties and role of institutions coincides with the definitions proposed by North and Ostrom discussed above. Institutions can be understood as "the rules of the game in a society or, more formally, the humanly devised constraints that shape human interaction" (North, 1990: 3). In principle, however, the IoS framework grants certain freedoms with regard to which definition of the term institution applies. As stated earlier, institutions are to be understood as both limiting and enabling factors for human action. Depending on the particular context, institutional change can thus be (better) explained either by evolutionary theories, on the one hand, or by collective-choice theories, on the other.

Hagedorn initiates a discussion on the specific characteristics and effects of institutions in nature-related economic sectors. The IoS originally addresses the question of under what circumstances and based on which institutional arrangements and governance system, can transactions in nature-related sectors be designed sustainably. Hagedorn also asks how institutions must be configured in order to approach the goal of sustainability. In order to answer these questions, Hagedorn proposes a distinction between integrative and segregative institutions.

Integrative institutions are rules that

> *"allow actors, who make decisions on transactions, not only to profit from beneficial effects, but also hold them responsible for adverse effects. Decision makers enjoy most of the benefits and bear most of the costs of their own decisions" (Hagedorn, 20 October 2005: 7).*

Segregative institutions, on the contrary, are rules that

> *"force actors who make decisions on transactions to refrain from receiving some beneficial effects, but also allow them to shift some of the burdens resulting from adverse effects to other actors. To a certain extent, decision makers forego benefits and avoid costs although they have caused them, and actors who have not participated in decision-making will have costs and enjoy benefits" (ibid).*

The integrative–segregative institutional approach is derived from the widespread perspective of negative external effects in resource economics, whereby environmental pollution or degradation is understood as the socialisation of costs arising from private actions. On this interpretation, integrative institutions prevent the socialisation of such costs and thus offer an incentive to minimise negative environmental impacts. With regard to my own research, the question of the extent to which agriculture (qua representative of a nature-related sector) may generate or require specific institutions becomes one of great interest.

Governance Structures. After actors and institutions, governance structures represent the third central point of reference within the IoS framework. Hagedorn (2008) defines governance structures as follows.

> *"Governance structures such as contracts, networks, bureaucracy, cooperation or markets are organizational solutions for making institutions effective, i.e. they are necessary for guaranteeing rights and duties and their use in coordinating transactions" (Hagedorn 2008: 360).*

Referring to Bromley (1989), Hagedorn emphasises the importance of a clear distinction between institutions and organisations. On this reading organisations are "not themselves institutions; rather they reveal how institutions define concrete governance structures for shaping human (inter)actions at an individual or collective level" (ibid.). Hagedorn's definition suggests that the term governance structure can be applied in practice to a wide range of organisational solutions. This understanding implies a high degree of openness, but arguably also a certain lack of clarity, which has to be dealt with in the course of applying the framework.

In the context of the present study, a number of assumptions are made with regard to the role and design of governance structures. First, it is assumed that, in south-eastern Anatolia's notoriously unstable political and economic climate, informal contracts are transaction-cost-saving and more flexible compared to formal contracts. For the same reasons, access to national and international commodity and credit markets is comparatively costly and at times even restricted. I conclude therefore that a large proportion of local transactions, such as those between neighbouring farmers or between farmers and agro-input dealers, are organised on the basis of informal contracts and/or through local markets. A second, related assumption is that collective action between members of the rural community is organised predominantly on the basis of kinship networks and family institutions. In other words, as a result of the widespread distrust engendered from the collective experience of several decades of violence and oppression, collective action tends to be strictly limited to ones' narrower circle of personal acquaintances and kin. Governance structures like farmers' associations, producer

cooperatives, labour unions and other types of organisations that facilitate collective action among strangers play only a minor role, if any at all.

Transactions. Transactions are another important component of the IoS. A somewhat more detailed elaboration of this concept is pursued, because Hagedorn's view of so-called nature-related transactions is a factor that predestines his IoS framework for the analysis of changes in agricultural production relationships. Williamson's (1981) approach to transaction-cost theory emphasises the usefulness of differentiating between transactions vis-à-vis their dimensions, asset-specific investments, frequency and uncertainty. He argues that different economic contexts comprise a multitude of specific transactions which again are addressed by very specific institutional arrangements and governance structures. These institutional arrangements and governance structures are tailored to minimise transaction costs — some with greater success, others with less. While transaction-cost economic theory can be applied to almost any type of economic interaction, the majority of examples addressed in Williamson's works are associated with transactions in industrial production contexts.

So how do nature-related transactions differ from the industrial-production-related transactions Williamson was mainly concerned with? The answer to this question lies in examining the properties of transactions. A number of transaction costs in agriculture stem from the necessity to cope with uncertainties similar to those found in other economic contexts, like market dynamics or the fluctuation of prices. In this regard, agriculture and other nature-related sectors like forestry or the fishing industry are clearly no different from any other economic endeavour.

However, Hagedorn (2008) argues that a variety of other transactions are only found in agriculture and not in industrial or service production processes. A range of pivotal transactions in agriculture occur in the context of immediate human–environmental interaction. Peasants for instance engage in nature-related transactions when they cultivate, plough, drain, fertilize, or spray herbicides or pesticides. The same can be said about activities where peasants damage, pollute, destroy or restore the environment. Adding to the complexity of such activities, many nature-related transactions involve numerous second tier-transactions (ibid.).

Nature-related transactions imply a great deal of uncertainty pertaining to the unpredictability of natural processes such as the weather, pests, plant and animal development, soil fertility and so forth. One way to react to uncertainty-related transaction costs is to try to reduce them through the use of agricultural inputs, applied technologies and improved breeding methods. Another strategy is to develop institutional arrangements and governance systems tailored either to reducing uncertainty or coping with potential harm. This includes, for instance,

insurance against crop failures and extreme weather events, or early warning systems and extension services. Bernstein (2010) stresses this point:

> *"While manufacturing transforms materials already appropriated from nature […], farming transforms nature through the very activities of appropriating it. Hence farming confronts the uncertainties of natural environments and ecological processes and how they affect the growth of plant and animal organisms" (Bernstein 2010: 89).*

Bernstein argues further that the uncertainties connected to agriculture's confrontation with natural environments and ecological processes represent one of the major factors that "inhibit capital from investing more generally, and more directly, in farming than in other types of production" (Bernstein 2010: 89).

Human–environmental interaction not only represents a source of many uncertainties, it also influences the mode and frequency of many agrarian transactions, an obvious example of which are seasonal changes and their implications for production cycles in horticulture. Similarly transactions like weeding, herbicide and pesticide spraying, and even harvesting are closely determined by natural processes like seasonal change or growth patterns of different varieties. The rhythm of natural processes thus determines the frequency and rhythm of transactions (Hagedorn 2008). Farmers also respond to the challenge of natural rhythms similarly to the way in which they have responded to the ever-present problem of uncertainty, namely, by developing coordinated institutions and governance systems. Obvious examples are strategies such as alternating between summer and winter crops, the cultivation of catch crops or the observance of fallow periods.

Asset specificity also plays a central role in nature-related transactions (Hagedorn 2008); it is both a source of transaction costs, as well as a way to minimise or reduce them. For example, peasants (like other economic actors) must decide whether to make asset-specific investments in technologies exclusively tailored to perform certain tasks, like irrigation or harvesting; or, instead, to outsource the intended transaction to a third party. The same holds for asset-specific investments in human labour: the peasant must decide whether to perform certain activities himself and/or with family labour, or whether he needs to hire external labourers. And, as with other economic activities, in agriculture there are also some tasks that require a high degree of skilled labour and therefore a high level of asset-specific investment, whereas other activities allow one to resort to unskilled labour requiring comparatively little need for asset-specific investment. Spatial asset specificity also plays a significant role in many nature-related transactions. Examples include investment in land or specialised production facilities. Further examples include crop or livestock specialisation, or the decision for (or against) cultivating perennials.

While agrarian (or, in Hagedorn's terms, nature-related) transactions differ from those of other production processes, peasants also face pressure to economise on transaction costs. Peasants face a plethora of decisions as to whether a transaction should occur at farm level, or whether it can be outsourced. One response to this coordination problem would be the development of creative agrarian governance structures and institutional arrangements, such as collective harvesting, collective machine ownership or different forms of collective action in irrigation.

Action arenas. Action arenas describe spaces of social interaction. Hagedorn's concept of an action arena is based primarily on Elinor Ostrom's approach described in the IAD.

> *"An action arena is a set of variables, including the action situation, the actors, the structural rules, the community attributes, and the material conditions that shape the action arena. The action arena is the social space in which individuals interact — exchange goods and services, solve problems, dominate one another or fight" (Ostrom 1998: 69).*

In other words, action arenas describe the context in which actors carry out one or more transactions on the basis of institutional regulation and specific governance-structure organisation. The identification of one or more action arenas offers orientation in the research process in the sense of delimitating the spaces of interaction relevant to the object of investigation.

Similar to the categories actors, institutions, governance systems and transactions, the action-arenas approach postulated in the IoS is also highly flexible. Action arenas can therefore describe a multitude of different interaction spaces. Moreover, depending on the particular research interest, either a single, clearly limited action arena can be the object of investigation or, alternatively, a set of different interconnected and/or independent action arenas. Paul Dragos Aligică (2013) speaks of "clusters of action arenas in conjunction" (Aligică 2013: 90). Similar to the other building blocks of the IoS, it is also possible in the case of action arenas to switch inductively to additional or alternative action arenas during the research process.

The interpretation of the category "action arenas" affects both the scope and scale of analysis. With regard to the scope of analysis, it should be noted that the analytical framework developed here is intended to enable the investigation of various agricultural action arenas. I assume, therefore, analogous to Hagedorn and Ostrom, that multiple action arenas are partly interconnected or clustered, and partly independent of one another. The decision to consider different action arenas is based on the assumption that agricultural change manifests itself in a multitude of different interaction processes (action situations), which can be found before, during and after the production process. Within these action situations different actors as well as a multitude of different transactions, institutions and governance systems can be examined.

Taken together, these action situations describe the social relations of production and reproduction, the quintessential analytical categories in Marxist theory. So, instead of concentrating on a single, narrowly defined and thus possibly de-contextualised action arena, the objective was to achieve the widest scope of analysis — i.e. the greatest breadth and degree of openness — possible.

Like the scope of analysis, the scale of analysis also had to be determined. In order to understand the local socioeconomic impacts of state-driven agricultural change, action arenas at the local and regional level became the focal point of the research.

The state as an exogenous driver of change. In this case study, agricultural change is a declared objective of the Turkish state. State intervention is to be understood as a decisive driving force of local and regional structural change. The motives and strategies of state intervention in agriculture discussed above included economic, political, ideological, and fiscal incentives. Targeted state influence on national and international markets for agricultural goods was another strategy referred to, including the targeted setting of standards, bids and prohibitions. As noted earlier, a consideration of these motives and strategies is an important starting point for classifying and understanding local and regional developments. Although the state is seen as a central factor in such development, the focus of my analysis is on the impacts of state intervention at the local and regional level. The state can be regarded therefore as an exogenous influence on local and regional action arenas, rather than as a directly involved actor.

Based on the above discussion of the heterogeneous rural power structure, it is assumed that the majority of the rural population sees the state as a remote, unreachable monolith whose decisions and impulses appear to be immutable facts, at least in the short and medium term. However, a minority of the rural population does have some short-distance channels into state organs, which give them at least some options for preferential treatment.

5 Methodology

This chapter explains the methodology I adopt to answer my research question. I begin with a brief account of the epistemological foundations of my work. I then discuss my choice of a qualitative research approach. Against this backdrop, I discuss a number of criteria that I consider important for achieving coherent and high quality research. In the same context, I reflect on the potential and limitations of achieving the highest possible degree of validity, representativeness and generalisability. I then explain my choice of the case method and of semi-structured open-ended interviews as the main technique and source of data for this research. I discuss the strengths and weaknesses of semi-structured interviews as a technique for gathering qualitative data. In addition, I explain my sampling strategy and the ethical handling of the personal rights of my interviewees. I then explain my research design which consists in a total of six work phases. This chapter concludes with an explanation of the approach chosen for the analysis and interpretation of my data and a reflection of the contextual particularities of doing qualitative research on South-east Anatolia's Kızıltepe plain.

5.1 Epistemological foundations

The epistemological assumptions of the present work are derived from the ideas of American pragmatism. The philosophical tradition of pragmatism, represented by authors such as Charles Sanders Pierce, William James, George Herbert Mead or John Dewey, assumes that the content of a theory should be determined by its practical consequences. This means, among other things, that pragmatists reject the assumption of unchangeable principles. For this research project, I would like to refer in particular to John Dewey's (1859–1952) theory of the interplay between human decisions, actions and social structure.[18]

One of Dewey's central assumptions is that a person's thinking and action is always determined by his embeddedness in a historically evolved social context and by the direct confrontation of the actor with his peers. Dewey emphasises particularly the emergence and effects of habitualised actions. Although Dewey argues that individual actions themselves contribute to the formation of social structures:

> *"Our individual habits are links in forming the endless chain of humanity. Their significance depends upon the environment inherited from our forerunners, and it is*

[18] Dewey's thinking on this topic is expressed in his 1922 publication, *Human Nature and Conduct: An Introduction to Social Psychology* (Dewey 2007).

> *enhanced as we foresee the fruits of our labours in the world in which our successors live" (Dewey 2007: 21).*

His emphasis is nevertheless on the above-made point that an actor's thinking and actions are determined by contextual events as well as by existing relationships to other actors:

> *"We often fancy that institutions, social custom, collective habit, have been formed by the consolidation of individual habits. In the main this supposition is false to fact. To a considerable extent, customs, or wide-spread uniformities of habit, exist because individuals face the same situation and react in like fashion. But to a larger extent customs persist because individuals form their personal habits under conditions set by prior customs" (Dewey 2007: 58).*

The theory of human action postulated in Dewey's pragmatism thus differs from the idea of a deliberative rational choice, which assumes that people can contemplate their goals and the means available to achieve them context-independently, and then, in a further step, as an act of free will, select a suitable means. Dewey's theory of action rejects the idea that human action is determined solely by cost–benefit calculations.

Another central assumption of Dewey is that social structure reproduces itself in everyday actions, i.e. habits. This assumption is of central importance with regard to the epistemological foundations of the analytical framework used in this research project. If social structures are reproduced in habitualised actions, then social structures and structural change can be observed and analysed at the level of such actions.

For both of Dewey's assumptions discussed here, a number of epistemological connections to Thorstein Veblen's classical institutionalism and to Elinor Ostrom's institutional-theory approach can be demonstrated. The relevance and the implications of the philosophy of American pragmatism for institution-theoretical approaches have already been discussed elsewhere (e.g. Bush 1993; Hodgson 2004; Aligica 2013); therefore, for the present work, it is sufficient to emphasise that Dewey's theory of human action can be understood as confirmation of an actor's understanding; the theory describes man as an actor whose actions are bounded, rational and influenced by complex social relations. A further implication of Dewey's theory of action is that it can function as a philosophical basis and thus provide argumentative support for focussing on action situations and transactions as a way to account for structural change.

5.2 A qualitative research approach

Qualitative social research aims at an in-depth understanding of social phenomena in their natural setting. The focus of qualitative approaches lies in particular on questions of "why" and "how" rather than the "what". In contrast to quantitative approaches which argue primarily on the basis of logical and statistical procedures, qualitative studies use a broad spectrum of methodological strategies such as case studies, biographies, historical analysis, ethnography, grounded theory or discourse analysis.

In cases where the object of research and the research question cannot be clearly defined at the outset, qualitative research approaches become indispensable. These are situations in which the research approach needs to be designed in such a way that *ex ante* unexpected perspectives and problems can be flexibly considered and subsequently integrated as they arise. Closely related to this aspect, is the ability of qualitative approaches to map, organise and explain complexity as well as contextuality. Finally, qualitative field research is the tool of choice when quantitative data are either unavailable or unreliable due to contextual conditions in the field. These aspects and a number of other advantages predestine a qualitative research approach for this study.

5.2.1 Principles for qualitative research work

Based on Creswell (2014), the qualitative research approach I have chosen can be described by a number of specific characteristics. The first characteristic, *natural settings*, describes the spatial and temporal context of empirical work. The aim of the research was to generate data directly in the field that is "at the sites where participants experience the issue or problem under study" (Creswell 2014: 184ff). The second characteristic, *participants' meanings*, refers to the use of personal problem interpretations by the interviewee subjects as the primary data/information source and, at the same time, avoidance of the research process' being dominated or possibly distorted by the researcher's own assumptions. Closely related to this feature is the third characteristic, *reflexivity*. Creswell (2014) describes reflexivity as follows:

> *"[The] inquirer reflects about how their role in the study and their personal background, culture, and experiences hold potential for shaping their interpretations, such as the themes they advance and the meaning they ascribe to the data. This aspect of the methods is more than merely advancing biases and values in the study, but how the background of the researchers actually may shape the direction of the study." (Creswell 2014: 186)*

Another characteristic of my approach is the use of multiple sources of data. In addition to interviews which constitute the main source, I integrate data from participatory observation, from analyses of documents, and from newspaper articles, scientific publications and official

statistics. My research design combines my focus on participants' meanings, a continual reflecting on my own assumptions and role, and the use of multiple sources of data; in so doing, this research project thus represents a learning and adaptation process in the sense of an emergent design (Creswell 2014). The constant review and adaptation of hypotheses and questions resulting from such an emergent design allowed me to correct erroneous assumptions and interpretations over time and ultimately to approach a holistic account of the investigated case. Creswell (2014) describes such a holistic account as an attempt

> *"to develop a complex picture of the problem or issue under study. This involves reporting multiple perspectives, identifying the many factors involved in a situation, and generally sketching the larger picture that emerges" (Creswell 2014: 186).*

As part of the idea of an emergent design with the goal of a holistic account of the investigated object, I finally chose a combination of *inductive and deductive working steps*.

5.2.2 Validity, reliability and generalisability

In addition to the characteristics outlined above, the value of my approach will also be measured in accordance with the validity, reliability and generalisability of the combined methods. Creswell (2014) proposes a series of strategies to ensure the validity of qualitative research results. Here, strategies like triangulation, member checking, clarifying the biases of the researcher and spending prolonged time in the field were used. Qualitative reliability means "that a particular approach is consistent across different researchers and different projects" (Creswell 2014: 201). In this work, the reproducibility of my results is aimed at through detailed description and documentation of the case study and simultaneous disclosure and elucidation of the analytical framework (see chapter 4). However, in natural and social settings, reproducibility is always naturally reduced. With respect to generalisability Creswell (2004) stresses that qualitative research does not intend "to generalize findings to individuals, sites, or places outside of those under study" (p. 204), but that "the value of qualitative research lies in the particular description and themes developed *in context* of a specific site." (ibid.) In other words, "*particularity* rather than *generalizability* […] is the hallmark of qualitative research" (ibid.).

This notwithstanding, I have deliberately selected the components of my case study with the aim of examining actors, action situations, transactions and governance systems "typical" for the region and the region's agricultural sector. At the same time, the design of my case study therefore permits assumptions in the sense of generalisation. This point is taken up further in the following description of the case method.

5.3 The case study strategy

I have chosen the case-study design as the method best suited to answering my research questions. Yin (1994) states that the case study represents an "empirical inquiry that investigates a contemporary phenomenon within its real-life context and addresses a situation in which the boundaries between phenomenon and context are not clearly evident" (p. 13). In comparison to other research strategies of qualitative and quantitative social research, case studies offer a number of specific strengths. Case studies are particularly useful in situations in which new processes or behaviours that are little understood are to be investigated (Hartley 2004). In this context, the case-study strategy allows us to answer "what", "how" and "why" questions about a contemporary set of events (Leonard-Barton 1990).

By choosing a predominantly qualitative approach here, I do not wish to omit the fact that quantitative research methods like surveys can at times be highly useful, in particular to answer questions of "what" in specific contexts or situations. In addition, quantitative research methods are useful for uncovering causal relationships between independent and dependent variables, especially if one is interested in observations on an aggregated level or generalised. Much more limited, however, is the capacity of quantitative approaches to provide answers to "how" and "why" a specific phenomenon can be observed, especially if that phenomenon is associated with context-bound preferences and choices by individuals. Here lies an obvious strength in qualitative research methods. A second, and partly related, strength of the qualitative case-study approach is its potential to achieve a holistic analysis of the subject matter. Gummesson (1988) describes it thus:

> *"The detailed observations entailed in the case study method enable us to study many different aspects, examine them in relation to each other, view the process within its total environment and also use the researchers' capacity for 'to understand'" (p. 76).*

At the same time, like any other research method, case descriptions are necessarily selective and thus limited in terms of how much they can explain. Apart from this comparison to quantitative approaches, case studies also offer advantages over other qualitative approaches such as a grounded theory approach or ethnography. Meyer (2001) stresses that case studies are

> *"open to the use of theory or conceptual categories that guide the research and analysis [while] grounded theory or ethnography presuppose that theoretical perspectives are grounded in and emerge from first-hand data" (pp. 331 ff.)*

As a consequence of this rejection of theoretically founded presuppositions, a grounded theory or an ethnographical approach poses the risk that the researcher, without the aid of a previously

developed theoretical framework, will spend much time collecting basic information, while remaining purely descriptive and failing to produce meaning in his final results (Hartley 1994; Gummesson 1988).

The development and implementation of a case study suitable for answering the research question requires a systematic selection and delimitation of the case. The analytic framework developed in the previous chapter and the different strands of theory used for this work, serve as orientation for the selection of the case study to be described below. A further aspect to this approach is to define the case in terms of spatial and temporal landmarks. As a spatial demarcation of the case description, I chose the district boundaries of Kızıltepe. This choice rests mainly on the fact that most of my interlocutors were from Kızıltepe; only a much smaller number of interview subjects came from neighbouring districts like Nusaybin, Derik and Merkez, all of which are situated in what is commonly referred to as the "Kızıltepe plain". Furthermore, agricultural statistics, when they were available at all, were organised according to district boundaries. The choice of the district as the territorial demarcation thus facilitates a comparison and substantiation of my observations with quantitative secondary data. What of course complicates the choice of this spatial demarcation is that neither landownership, nor the majority of transactions related to production, marketing or labour are ever exclusively restricted to the district territory.

The temporal demarcation of the study is the period from 2000 until 2013. The case description thus begins with the situation one would have encountered in the late 1990s and ends with the situation that I personally observed during my fieldwork between 2011 and 2013. The 1990s are a sensible place in time to start this description of agrarian change because it is the period right before the Turkish government decided to seriously act on its plans to develop South-east Anatolia. A second period during which even greater impacts on agrarian change can be observed is the one beginning in 2002 when the AKP-led central government chose to substantially increase its support for irrigation, mechanisation and other improvements with the end of agricultural intensification in its sights. The description of the situation and the developments encountered during 2011–2013 rest strongly on my own personal observations and results from the interviews which I collected. Agricultural statistics and other quantitative data such as those provided by the Turkish Statistical Institute (Turkstat), for instance, are used to substantiate, confirm or challenge my set of exclusively qualitative data whenever possible.

5.4 Semi-structured interviews

The entire field research comprises 47 individual interviews and two group interviews. Of these, 13 interviews were conducted during the exploration phase and eight during the first

phase of field research. In the second phase of empirical field research, an additional 26 individual interviews and two group interviews were conducted (see table 1).

All interviews were conducted based on a semi-structured design with open questions. This means that, apart from a few, broad key questions which served to get the conversation going, there was neither a predefined procedure, nor a fixed timeframe set for the interviews. Such a design is useful because it reduces the risk that false preconceptions about the case or the actors involved could surreptitiously affect the data. Furthermore, the semi-structured design with open questions is meant to serve as an invitation to the interviewees to tell their own stories in their own language. Whereas the key questions remained the same throughout the interviews, in the course of each of the interview rounds, the topics raised were constantly adapted to the growing body of information. However, using such interview techniques is also challenging because it gives the interviewer less control over the course of the conversation and reduces the comparability of the interviews due to their uniqueness. Finally, it should be noted that the open design is time-consuming and that a degree of irrelevant data will also be collected.

Table 1: Number of interviews conducted in each field phase

Phase	Number of Interviews
Exploration	13
Empirical fieldwork I	8
Empirical fieldwork II	26 + 2 group interviews
Total number of interviews for all three phases	47 + 2 group interviews

The decision to conduct two focus-group interviews rests on the understanding that group interviews are, first and foremost, resource-efficient (Frey and Fontana 1991). Simply put, several voices can be recorded in a single interview situation. Far more important, however, is the fact that group interviews can at best provide valuable additional information and insights about a social or behavioural event (ibid.). Group dynamics play an important role here. In the best case, group interviews can lead to a situation in which the participants, with the support of the group, dare to express their opinions more openly. In addition, a group-interview setting can, in the best case, lead to the participants correcting, supplementing or enhancing each other and thus broadening and advancing the discussion. In other situations, however, group dynamics can turn out to act as an obstacle to communication, making individual interviews in this case a better choice (ibid.). The “enforced public” of the group can unsettle an individual to such an extent that no one is really willing to reveal his or her

true opinion. For the interviewer, nevertheless, both cases are interesting from a purely observational perspective.

The interviews that were conducted in the process of this study can be further differentiated according to the affiliation of the interviewees to different stakeholder groups. Accordingly, a total of ten individual interviews were conducted with representatives of the state, e.g. actors in various public offices at local, provincial, regional and national level. Two of those representatives did hold a public position at the time of the interview. Important to note is that these two individuals belonged to the political opposition which was in open conflict with the national ruling party AKP. Representatives of the agribusiness group included a total of 11 interviewees. As shown in tables 2 and 3, business actors both upstream (e.g. fertiliser traders) and downstream of production, (e.g. wheat traders), were interviewed; three researchers were also interviewed.

Table 2: Number of interviews per agrarian stakeholder group

	Farming Community	**State**	**Agribusiness**	**Research**
Number of interviews by stakeholder group	23 + 2 group interviews	10	11	3

Most interviews were conducted with members of the farming community (a total of 23 interviews as well as two group interviews). This can be explained by my particular interest in the way structural change in agriculture affected the different members of this group, and how social and economic relations within it changed in the course of these structural shifts. As already described, the group was anything but homogeneous. The 23 individual and two group interviews can therefore be further broken down into subgroups (table 3).

Lastly, I also had innumerable spontaneous discussions with villagers, local authorities, traders and scientific experts during my stays in the field as well as in the course of visits to different German and Turkish organisations or institutions like universities (see section 5.5 below).

Table 3: Number of interviews per farming community subgroup

	Middle-sized Farmers	**Smallholders**	**Migrant Farm Labourers**	**Skilled, Hired Farm Labourers**	**Agha, Large Landlords**
Number of interviews by farming community subgroup	6 + group interview	5	2 + group interview	4	4

5.4.1 Recording, privacy rules and ethical approach

The interviews were recorded whenever the situation felt appropriate for the interviewee. Furthermore, whether recorded digitally or handwritten, a postscript was produced for each interview. Each postscript covers details regarding the origin of the interview including third persons who possibly helped in establishing the contact, a reflection of the atmosphere during the interview and notes regarding open questions and further steps.

The majority of my interviews were organised by appointment and then conducted in a formal setting. However, a number of other interviews emerged spontaneously from informal, casual conversation. In the case of formal interviews, asking my interlocutors for their permission to record the sessions was expected and often accepted. Interviews evolving from unplanned, casual contacts occurred frequently whenever I talked to small landowners and agricultural wage labourers on my trips to villages and fields. I soon learned that this way of becoming engaged, and the casual and friendly tone those conversations elicited, was often contingent for people's hospitality and their readiness to speak their minds freely. Thus to produce a recording device during such informal interviews turned out to be counterproductive and, after several such experiences, I decided that simply taking notes would be the preferable, less intimidating way to document the conversations.

All field recordings were transcribed immediately after the trip. All interviews were anonymised in order to secure my interviewees' privacy and personal safety. This anonymisation procedure has no further implications with respect to the validity of my argument because my interviewees were, to a large extent, chosen randomly. Each interviewee should thus be understood as representing some specific key group, like large landlords, smallholders, landless wage labourers etc.

5.4.2 Sampling approach

Apart from directly referring to the contacts I had established prior to my field trip, interviewees were also identified based on the snowball-sampling approach. At certain points in every interview the interviewees were asked to indicate other potential interviewees. This occurred mostly when the interlocutor talked about issues of particular relevance and interest, or in situations in which the interlocutors' statements were either unclear or contradictory. The persons indicated by the interviewee could therefore be one providing supportive testimony or one representing an opposing position.

The strong reliance on snowballing has potential implications with respect to the quality of the data and the overall validity of the research. Accordingly, both of the above-mentioned approaches to selecting my interviewees — viz. the personal-contact network and the snowball-sampling approach — imply the risk that the interviewees chosen may reflect a bias favouring only the most accessible individuals in a specific population segment and their peers. Whereas a part of this tendency is just the unintentional effect of the approach, the problem becomes even greater when interviewees consciously make a decision to recommend which other actors he or she would like the researcher to talk to and consequently which actors would ultimately be excluded.

I made an attempt to reduce this problem by relying on several disconnected contact networks and several snowball samples simultaneously. Accordingly, one of the networks I relied on were actors who belonged to the Kızıltepe farming community, who had little or no relation to the circles of local administration and academia. The initial access to this farming community network was gained through a contact of mine in the Kurdish Diaspora in Germany. A second network of contacts was based on contacts I had made through a local university. Whereas the farming-community network allowed me to make contact to many small- and middle-sized local farmers, this second network was crucial in my gaining access to officials, politicians, administrators and large landowners.

On the basis of this procedure, I was able to work with a total of three separate samples. The three samples are identified as I, II and III in the following (see sections 5.5 ff. below).

5.4.3 Language and translation

Except for a few cases in which interviews could be conducted in English, all remaining interviews were conducted with the support of a translator. The language used for the interviewees was generally either Turkish or Kurmanci, sometimes both. Interviews with practitioners such as smallholders and middle-sized farmers, farm labourers and local businessmen were conducted almost exclusively in Kurmanci. In contrast, interviews which I

conducted with actors holding some form of official public position, e.g. administrative staff, politicians, extension officers or otherwise, were held primarily in the official language of the state, Turkish.

Worthy of note here is the following: if the interviewee was a Kurd, my translator would often switch from Turkish — the official language — to Kurmanci after a time during the course of the interview. This is similar to what Martin van Bruinessen (1992) observed during his interviews with Kurdish unionists in Kızıltepe some thirty years ago. In these instances, van Bruinessen noted that switching from Turkish to Kurmanci often led to an actual change in the atmosphere and even the content of the conversation (ibid.). In a similar way, I experienced that, with the switch to Kurmanci, the atmosphere became less formal and, in turn, the interviewee would disclose more information. In several cases, by using the local language rather than the official one, it appeared as though my interviewee was suddenly released from his duty to adhere to what James C. Scott (1990) refers to as the "official transcript", becoming, instead, a private person willing to reveal more than what he or she might otherwise do in a formal setting.

5.5 Research design

In the following I detail the design of my research. According to Yin (1994) a research design represents "a logical sequence that connects analysed data to the research question and ultimately to the conclusions of the study" (p. 19). My research can be divided into a total of six successive work phases spanning a period from 2010 to 2019.

5.5.1 Phase I: Definition of research topic and research questions

The first working phase from autumn 2009 to mid-2010 was devoted to developing the topic and defining the overarching research question. In this phase reviewing the literature was my main task, scrutinising intensively a plethora of scientific books and journal articles on agricultural policy and agricultural development in Turkey and in other regional contexts. Honing the subject matter, bringing the topic into sharper focus, and refining the research questions was achieved through this careful reviewing of the literature and many discussions with peers at the Leibniz Institute for Agricultural Development in Transition Economies (IAMO) as well as from the Resource Economics Department at Humboldt-Universität zu Berlin (HU).

5.5.2 Phase II: Exploration and analytic framework

The second work phase from mid-2010 to the end of 2011 comprised a series of activities undertaken in the context of an initial, explorative phase of fieldwork in south-eastern Turkey

and longer periods spent doing desk work at various institutes of higher learning in Germany, Turkey and Norway. One of the main goals of the desk work was to develop a theory-based analytical framework to support the empirical case study. In this context, my colleagues in the research colloquium of the Department of Resource Economics at the HU were an invaluable aid to my research as contributors and as partners for scientific dialogue. I also received important impulses and support in the course of a two-week stay at the Economics Faculty of Boğaziçi University in Istanbul. In addition to the explorative field trip I undertook, the exchange with my Turkish colleagues provided an important underpinning and forced me to scrutinise my own approach and review many of the assumptions I had made up to that point.[19]

The field-exploration part of this second phase had several objectives. First, it served as a "reality check" for the layout of the topic and the viability of the research questions. Another central goal of the field exploration was to identify a suitable case to serve as the prototype for study. Finally, this initial field exploration served to establish a personal network in the region under study and to make preliminary preparations with a view to the subsequent stays and work in the field.

The exploration phase comprised about a month of fieldwork in Mardin's neighbouring province Şanlıurfa. Close to the city of Şanlıurfa lies one of the most well-known GAP pilot-project areas, the Harran plain. The GAP has provided irrigation to farmers in Harran since the mid-1990s — a period of nearly three decades. Being able to visit and talk with some of those farmers was of great value to this research because it provided me with first-hand accounts of people's experiences with the GAP irrigation scheme. In addition to meeting with farmers in Harran, the trip to Şanlıurfa also allowed me to visit parts of the already existing GAP superstructure including the "Atatürk Dam" on the Euphrates, the main pumping and diversion stations in the Bozova district and a small part of the primary and secondary canal system through which the waters of the Euphrates are diverted to the fields around Bozova and the Harran plain. The same canal system that provides water for Harran and Bozova has been lengthened by another 136 km to reach the Kızıltepe plain. My visit to the sites of the superstructure and with some of the people working with it, gave me a first-hand feeling for the magnitude of this public water project and some of the challenges associated with its construction and operation.

[19] Generally, it should be noted at this point that the regular visits to Turkish universities in Istanbul and in the south-east of the country played a major role in the success of this work. Close interaction with my Turkish colleagues, in addition to the intensive academic exchange that this resulted in and establishing crucial contacts, also served as an important source of information which would have remained otherwise untapped had the reseach been limited to English-language sources or an exclusive exchange with non-Turkish scientists. Of course, it should be noted that my Turkish colleagues, like myself, also drew their own picture of the region and its people based upon their own assumptions and that these would not necessarily all be confirmed in the course of my empirical work.

A second reason for visiting Şanlıurfa was that the city hosts the GAP Rural Development Administration and several other main branches of the Turkish agricultural and water administration. In Şanlıurfa I conducted interviews with staff members from the GAP Regional Development Agency, the regional branch of the General Directorate of State Hydraulic Works (DSI), and engineers in charge of the Bozova Pumping Station. During the exploration phase, I carried out a total of 13 interviews, the majority of which involved conversations with state representatives working in those administrative units (see table 5, appendix II).

A several weeks long visit to Harran University's Faculty of Agriculture proved particularly important in order for me to access substantial expert knowledge about the region's agrarian sector. I was able to discuss my topic frequently with a number of senior staff members, some of whom had had several decades of experience with local production patterns, marketing, mechanisation, labour organisation and the region's agro-ecology. Second, and equally important, being invited by Harran University's Faculty of Agriculture was crucial to my being able to gain access to interviewees in the region. University staff, particularly senior professors enjoy a considerable reputation in Turkey, a fact which is reflected, for instance, in their being customarily addressed with the honourable term "Hoca" ("master" or "teacher") and their being accorded extra hospitality whenever they are received. By introducing themselves to local individuals as university "Hoca" and me as their personal guest, my university hosts opened many doors for me, which otherwise would have remained closed. Furthermore, several of my contacts at Harran University had close connections to civil servants in the agricultural and water administrations. My reliance on this network was crucial to the success of my research, a fact which was made all too apparent whenever I attempted unsuccessfully to arrange interviews or to obtain information from officials without referring to these personal university contacts.

5.5.3 Phase III: Empirical work 1

The third working phase was carried out during the first quarter of 2012. This included a series of eight interviews in the Mardin/Kızıltepe region which I had selected for the case study, and several longer periods of desk work. In addition, I also had the opportunity to continue discussions with experts in local agricultural economics and rural sociology during a guest stay at Mardin Artuklu University, Turkey. Taken together, these activities constituted a further step, based on my initial findings, towards concretising and adapting my analytic framework and for determining the parameters of the case study. A large part of the interviews in this first empirical phase were carried out with representatives from agribusiness upstream and downstream of production (table 6, appendix II).

During this phase, I spent a substantial amount of time in Mardin's urban centres, namely, in the town of Kızıltepe and the town of Mardin. The town of Kızıltepe is the centre of Mardin's agribusiness; so interviews conducted in Kızıltepe involved mainly those persons engaged in activities upstream and downstream of agriculture including, for instance, large and small retailers of various agro-inputs, retailers of irrigation machinery and technical equipment, grain and cotton traders, as well as owners of processing plants for cotton and animal fodder. Apart from these interviews with persons in the agricultural sector, I also spoke to officials in Kızıltepe's district administration, all of whom were members of the pro-Kurdish Barış ve Demokrasi Partisi (BDP).

The town of Mardin constitutes the province's political, administrative and financial centre. The interviews conducted there were done mainly with staff members from the provincial agricultural administration, but also included informal conversations with staff members from the Agricultural Bank (Ziraat Bankasi) and a public agricultural credit cooperative. In addition, interviews were carried out with agricultural extension officers and local politicians from the AKP which at the time held a majority of votes at provincial level and in the Arab-dominated Mardin Merkez District.

5.5.4 Phase IV: Empirical work 2

The fourth working phase, during the second and third quarters of 2012, represents the main empirical part of the research. Altogether I spent a little more than four months in the field. Out of a total of 47 interviews, 26 individual ones and two group sessions were conducted in that period (see table 7, appendix II). The data collected over the course of these interviews was supplemented by information gathered from many informal conversations and first-hand observations made during my several visits to the region. Although I continued to consult with state representatives and various actors from the agribusiness side during this phase, a majority of the interviews I conducted during this fourth phase comprised conversations with actors from the farming community. These took place during my excursions to the surrounding villages and fields, at a variety of different venues, in the respective real-life contexts of my subjects. Accordingly, I interviewed some individuals just after harvest work or at times when crops were being irrigated; I conducted these interviews in teahouses, at market stands or in storerooms full of cotton and wheat. Other interviews were held, for example, in the living areas of farmhouses, in the office of a village leader or in local clubhouses.

Upon completion of this main phase of empirical fieldwork, in the fourth quarter of 2012, I was given the opportunity to present and discuss my data and initial conclusions during a two-month guest stay at Yale University (New Haven, Connecticut, U.S.A.) in the Yale Macmillan Program in Agrarian Studies. My participation in a colloquium and my interaction with

colleagues there was inspiring and proved to be invaluable for the next step: evaluating and interpreting the data in phase V of my research.

5.5.5 Phases V and VI: Data analysis and write-up

The fifth phase of this project was devoted to evaluating and interpreting the data collected in the field. The concluding phase, VI, from 2014 to 2019, was given to summarising my findings and writing this book. In what follows, I present a detailed description of how the data was processed, underpinning the validity of my results.

In processing and analysing the data, I followed Mayring's (1991) approach of "structuring qualitative content analysis" (*strukturiende Inhaltsanalyse*). Qualitative content analysis is a systematic processing of material from communications which aims not only at the content of verbal material, but also at the identification of and inquiry into formal aspects and latent meanings (ibid.). Mayring distinguishes between three types of qualitative content analysis, namely, "summarising", "explaining" and "structuring" content analysis. In this work, a structuring content-analytical approach is applied.

Mayring (1991) argues that qualitative content analysis, despite its apparent strengths, always benefits from triangulation with other data or methods. I have carried out this triangulation by comparing the data derived from content analysis with specially written field notes of personal observations and official quantitative statistics from the Turkish government. The discussion of my results in the following chapters is a result of this triangulation.

The structuring content-analytical approach is predominantly deductive, but I proceed by using a combination of deductive (theoretically guided) steps and inductive (derived from the material) steps. This means that, in addition to the categories derived from my analytic framework, other types of categories were generated from the interview material itself. The transcribed interviews from the exploration phase and the empirical fieldwork phases, I and II, serve as the corpus of analysis. The main object of investigation, however, is the total of 34 individual interviews and two group sessions from the latter phases mentioned here.

The individual analytical steps described here are illustrated in figure 2 (below):

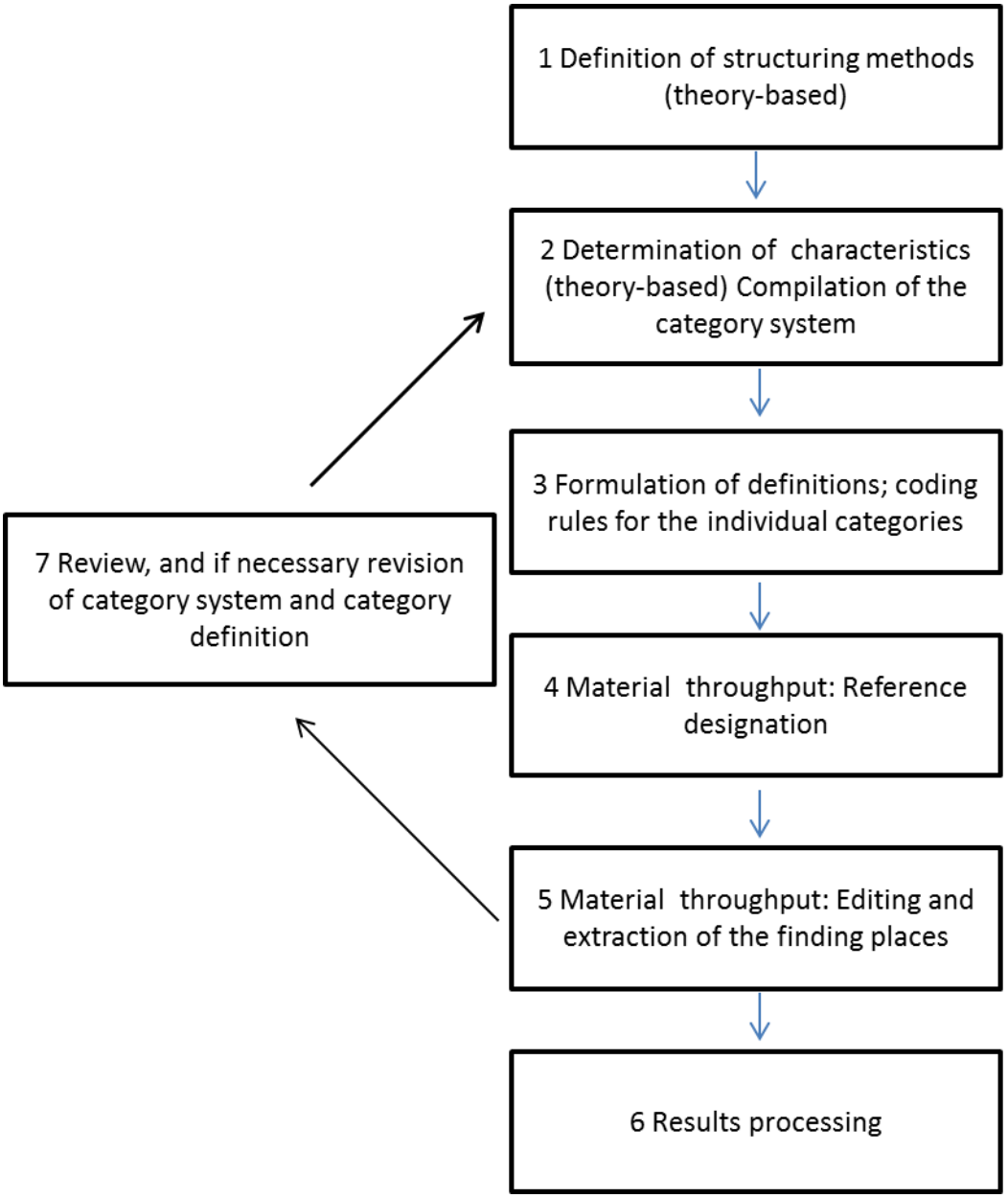

Figure 2: Consecutive steps in the structuring content-analytical approach[20]

5.6 A reflection on context and personal role

Context matters greatly for in-depth case-study research and, associated to this, for the quality of one's data and the validity of one's findings. An aspect which clearly deserves attention with regard to my interviews is my own personal background first of all as a foreigner and, second, as a researcher. At the outset of my research, one of my first experiences was that, in Turkey's south-east, any conversation between strangers would at some point come to questions concerning one's place of origin, family and friends, and that one's origin,

[20] Based on Mayring (1991).

relationships and connections would have a significant influence on how a conversation or an interview would develop. Given the importance that was attached to those matters, inquiries into them occurred usually right at the beginning of a conversation, just after initial introductions and an exchange of a few words of hospitality. Needless to say, such inquiries regarding each other's personal backgrounds can occur in almost any conversation among strangers anywhere in the world. Moreover, whenever such an inquiry reveals any kind of connections between the interlocutors or even some mutual acquaintances, then this almost always facilitates the conversation. However, what is probably special about the people and places I visited in south-east Anatolia is that a "wrong" answer in this context might well make conversation impossible or end an interview abruptly.

Unlike native speakers of Turkish and Kurmanci wishing to conduct research in the region, as a non-native researcher with only basic language skills in both languages, my interviews relied heavily on a high-quality translation. During the selection of my translator, I put great emphasis on choosing a person who was to some extent connected to the local community and culture. One reason for this was that, being a complete stranger to the region, I could only benefit from such a person's level of knowledge and experience. And I was very fortunate: Just as I had experienced with my colleagues from Turkish academia, at various instances my translator turned out to be a valuable source of information as well as an astute instructor and interpreter of local customs. Another reason for choosing a person with local knowledge was based on my previous experiences with local people and their willingness to consent to an interview. Selecting someone who would also be a stranger to the region could severely hamper interview research because local people would simply be far less willing to engage with and talk to us. Whereas, I was unmistakably a complete stranger, what counted much more was who was in my company. As a case in point, at several instances, I was accompanied by a Turkish researcher who had no personal connection to the region or its people, and who was regarded almost as much a "foreigner" as I was. The two of us were frequently confronted with hesitance and reluctance. And, even in cases where individuals had agreed an interview with us, I often had the impression that the interviewees were only willing to share very general information.

The translator turned out to be a key asset. He was from Diyarbakır — a town many people in the region refer to as the "capital of the Kurds". His mother tongue is Kurmanci just like the people in Kızıltepe, so he was immediately regarded by them as "one of their own". The fact that he went to university in Istanbul and "made a career" despite his young age only added to his positive standing. Unlike some of my more frustrating experiences, I found that, whenever my translator identified himself as coming from a place nearby and having some form of connection to the region — even mutual acquaintances or family — this almost always

guaranteed winning over our interlocutors and our being received with great hospitality and openness.

Despite every possible effort to overcome my personal shortcomings by selecting a particularly skilled interpreter or by trying to avoid misunderstandings during or after the interviews, I am still acutely aware that translation in general implies a remaining risk for the interviewer of getting things wrong or to losing out on some potentially important information. To downplay the language problem would be false; nevertheless, I also have reason to believe that being a foreigner, despite the language deficit, was actually advantageous in other respects. My own personal background for instance seemed to matter in a positive sense, because many Kurds in Kızıltepe turned out to have friends and family in Germany and particularly in my home town of Berlin. In several cases in which the conversation turned to the interviewee's family in Germany, I was asked to take gifts or greetings back to Berlin. One farmer with whom I spoke, in a village just west of the town of Kızıltepe, even produced his cell phone during our interview and called up his cousin in Germany urging me to talk to him in German.

Because I was a foreigner and certainly because I was in the company of a local man, I found that the majority of my interviewees were quite eager to show both their hospitality and expertise by responding to my questions at much greater length and in more detail than I had initially anticipated. In order to make me understand "how things work out here" — be that in the "family", in "agriculture", in "Kızıltepe", in "Kurdistan" or "Turkey" — many of my interviewees would take great effort to contextualise their answers with additional information, anecdotes, personal opinion and even gossip. This exceptional readiness of many interviewees to share their expertise and to express their opinions seemed to grow the more I revealed my ignorance of so many matters and the more frequently misunderstandings between us — translator, interviewee and interviewer — arose. These observations are much in line with Özbudun and Ulusan (1980) who argue that, whereas interviewees may sometimes be intimidated by native researchers and thus remain close-mouthed, the same interviewees can be much more outspoken when facing non-native researchers in whose presence they truly feel as though they are being consulted as experts. What followed from this was that several of my interviewees felt inclined to take on a paternal tone, that is, to "teach" me or sometimes, rather mockingly, to "test" me. More than once, I was addressed with remarks like "You're a smart student, what do you think?", "You can calculate this yourself!" or "Look out, he's learning fast!"

Interviews that clearly did not fit into either of the above mentioned patterns were those with persons from the group of landless labourers, especially women. Trying to speak with them was almost always overshadowed by their reluctance to join a conversation, and it often took

repeated attempts and lengthy introductions before an interview could in fact be conducted. I was often confronted with mistrust and insecurity on the part of the fieldworkers regarding what I do would do with the information I obtained or how their bread-giving landowner might react to their participation in an interview. In such situations the interviewees would often ask for whom I worked or whether what was said would really be made anonymous.

In many of my conservations with men from the group of landless farmworkers, I had the impression that my interviewees were ashamed of talking to me about their personal situation. This was surely due in part to the obvious fact that, between me as the interviewer and my interview subject, were two starkly different social backgrounds. My role as a university researcher and my country of origin being "rich Germany" may have been intimidating. Shame may also have played a role in conversations with impoverished family fathers whose underage daughters had to work in the fields to help make ends meet.

Finally, my being a male researcher was a clear disadvantage in conversations with female interviewees. A reason for this may be that, in the context of the conservative conventions of the rural regions, women and girls are perceived as "not suited" to speak in public settings, especially with male strangers.

Looking back, it is not possible to say with certainty when and to what extent I actually won the trust of my interlocutors in this group. It is also impossible to judge conclusively how openly and unfiltered these conversations were conducted. For an approximate assessment, however, I can rely on my personal impressions regarding the atmosphere of the respective conversation and the assessment of my translator. Furthermore, a certain degree of clarity can be obtained by comparing different interviews of the same group and across groups.

6 State intervention and agricultural support in Turkey 2002–2013

In this chapter I focus on the Turkish state in its current role as an agent of agrarian change and I discuss a number of influential support programmes that shaped Turkish agricultural development in the period from early 2002 up to 2013. With the focus on agricultural policies after 2002, this chapter begins at the point where the historical overview presented in chapter 3 ends.

Some of the agricultural support programmes and development measures discussed in the following were applicable to the country as a whole, while others were specifically designed to expand irrigation and increase mechanisation in the South-east Anatolia region in particular. All of the measures described were introduced at a time when the Turkish government had set highly ambitious future development targets for its agricultural sector. In short, by 2023, Turkey aimed to be among the world's top five agricultural producers (Government of Turkey April 2013). To accomplish this task, the government set the goal of a 1.5-fold increase in exports of agricultural commodities, amounting to 40 billion USD (ibid.). This again would result in a 1.5-fold increase in agriculture's contribution to the country's GDP, amounting to roughly 150 billion USD (ibid.). The government's vision at the time was that a major share of the country's increased agricultural output would come from intensified production in its south-eastern provinces (Government of Turkey April 2013).

6.1 Agricultural subsidies

Agricultural subsidies continue to represent an important support and steering mechanism in Turkish agricultural policymaking. Subsidies have been re-organised regularly over the last two or three decades. The reason for this continuous revision has lain partly in the state's attempt to use subsidies as a steering mechanism for structural transformation (Akder 2010). As will be described at greater detail below, a number of direct subsidies were aimed at promoting the production of specific crops in specified locations (ibid.). Another reason for the repeated revisions to the subsidy scheme can be found in the context of Turkey's general economic policymaking and the country's international trade regime commitments. Agricultural subsidies became a matter of constant conflict in which the Turkish authorities attempted to balance international demands for deregulation with opposing demands by the local rural electorate (Akder 2010).

Agricultural subsidies increased in the period under review, from 1.8 billion Turkish Lira (TL) in 2002, to 7.1 billion TL in 2011 and 7.6 billion TL by 2012 (Government of Turkey April 2013). In other words, subsidies had nearly quadrupled at the end of the ten-year period that began in 2002. In total, over 50.6 billion TL of support payments were given to farmers in the

2003–2012 period (OECD 2013). At the time of my field research, important direct subsidies included payments to farmers for inputs like fertilisers, fuel and seeds, as well as premiums paid per type and amount harvested of different exportable crops such as wheat, maize and cotton. Table 4 gives an overview of the different types of subsidies granted to support the production and sale of wheat in Turkey in 2013. This amounted to a total of 5.6 billion USD, with the biggest share in support coming from TMO (Turkish Grain Board) purchases.

Table 4: Subsidy expenditure for wheat in Turkey in billion USD 2013[21]

Subsidy type	Payments per unit	Expenditure in billion USD
TMO administered guaranteed price	252.5 $/MT	$4.500
Wheat premium	24.3 $/MT	$0.429
Seed subsidy	36.5 $/ha	$0.286
Soil analysis subsidy	12.1 $/ha	$0.095
Fuel subsidy	20.9 $/ha	$0.164
Fertiliser subsidy	26.8 $/ha	$0.210
Total expenditure in billion USD	**$5.684**	

In 2010, the Federal Ministry of Food, Agriculture and Livestock introduced a new policy for organising agricultural subsidies. The "basin-based support programme" differentiated between crops that were eligible for deficiency payments across so-called "agricultural basins". By applying crop-specific subsidies across regions, the Turkish government aimed, first of all, to increase overall productivity, with crops to be cultivated based on the most suitable ecological conditions; secondly, the scheme was designed to change the cultivation pattern by increasing the production of those crops that Turkey still had to import, while decreasing the excess supply of other crops (OECD 2011). Within the scope of the Basin Model Support Scheme, a total of 30 agricultural basins were designated based on climate, soil, topography, land classes and land-usage types. For each of the 30 basins, strategic, specific, supply-deficit and competitive crops were selected and subsidies assigned accordingly (ibid.). Deficiency payments — intended to increase the production of crops largely undercultivated in Turkey — within the basin-based support programme were made in Kuruş[22] per kilogram. By 2012, fifty-two new items had been identified for support and initiated into the basin model scheme (Government of Turkey April 2013). The OECD

[21] United States Department of Agriculture (2014).

[22] Kuruş is a subunit of the Turkish Lira. 1 Lira equals 100 Kuruş.

estimated that under the basin model support programme total crop production would be increased by 7.1 million metric tons with significant increases in wheat and oilseed especially (OECD 2011). Mardin including Kızıltepe was included in the "GAP Basin".

6.2 Administered prices through the TMO

In addition to its broad subsidy programme, Turkey further maintained its long established practice of price support, a scheme under which farmers could sell their wheat and other produce to the state-operated grain board, the TMO. The TMO had provincial sub-branches and local bureaus in several provinces including Mardin. It purchased crops at pre-established intervention prices, providing farmers with substantial additional income and a buffer against price volatilities. In 2012, those prices paid by the TMO were about 19 per cent higher than those that farmers would receive on the world market (US Department of Agriculture 2014). The TMO's purchases of wheat, corn, barley and rice under these programmes was significant over the course of the early 2000s. On a national scale, the TMO had purchased on average between 10 per cent and 25 per cent of the total grain produced in the period from 2000 to 2012 (ibid.).

6.3 Support mechanisms for certified seeds and livestock breeding

In 2005, the Federal Ministry of Food, Agriculture and Livestock began to subsidize certified seeds and seedlings. This resulted in an increase of their usage by farmers, from 150,000 tons in 2002 to 550,000 metric tons in 2011 (Government of Turkey April 2013). In 2008, certified seeds produced by international private companies were included in the support scheme, thus offering another new entrance point for international agribusiness into the Turkish market (ibid.). Back-to-back with its support for certified seed usage, the Turkish government also introduced new livestock subsidies (ibid.); farmers were paid at a rate 50 per cent higher than previously for organically raised livestock (ibid.). This scheme also supported animal husbandry breeding techniques such as hybridization of cattle (crossing different strains) and artificial insemination[23] (ibid.).

6.4 Tax exemptions, wage support and other economic incentives

The AKP-led government established investment incentives in order to catalyse private investment particularly in the south-eastern provinces of Turkey. Investment incentives were offered mainly through the Turkish Federal Ministry of Economy, the Federal Ministry of

[23] The Government of Turkey (April 2013) promoted studies looking into artificial insemination in animal breeding. Following these efforts, according to the government, the number of artificial inseminations carried out in Turkish agricultural animal breeding increased significantly — from some 624,000 in 2002 to 3.6 million by 2012 (ibid.).

Food, Agriculture and Livestock, and the European Union's IPARD (Instrument for pre-accession assistance for rural development) programme (Government of Turkey March 2014). Investment incentives were differentiated according to regions, which gave the government an opportunity to emphasise its efforts in the country's least developed regions. Mardin was associated with "Region 6" which received the strongest support in the investment incentive scheme (ibid.).

The programme of incentives included value-added tax exemptions and reductions, a customs' duty exemption for purchases of machinery and equipment, and 49 years of land allocation incentives, the last contingent upon a minimum investment of one million TL in the 1st and 2nd regions, and 0.5 million TL in other regions including region 6 (Government of Turkey March 2014). Although this scheme provided substantial support to anyone willing and able to invest in agriculture, the minimum-investment rule meant that smallholders were often left out. The recipients of these benefits were thus primarily medium and large landowners.

For region 6 in particular, a guaranteed tax reduction of 50 per cent was introduced, to be applied to corporate or income revenues (Government of Turkey March 2014). This incentive had to be qualified based on the fact that, in South-east Anatolia, there was generally a high rate of unpoliced tax evasion and that, according to the OECD (2013), most farmers in Turkey were exempt from income tax because the average farm size was small, yielding only a low average farm income. Finally, investors received considerable support for interest on credits and loans, for instance, obtained through the formerly state-owned Ziraat Bankası. The highest interest-rate support was, again, provided for region 6.

6.5 Agricultural credits and investment incentives

In the period under investigation, agricultural credit was increasingly and consciously used as a public steering mechanism to foster certain types of investments, most notably in irrigation and livestock production. A majority of agricultural credits in Turkey were provided by Ziraat Bankası. Access to credit was notoriously complicated and expensive, especially for farmers in the South-east Anatolia region. Since the mid-2000s, however, major efforts were made to increase their access to affordable credit. While credit interest rates for agricultural investment were at a staggering 59 per cent in 2002, borrowing for investment in crop irrigation and livestock breeding eventually became interest free, and no more than 7.5 per cent for other agricultural investments (Government of Turkey April 2013). Over and above this, agricultural credit periods were extended from 18 months to 24 months for operating credits, and from five years to seven years for investment credits (ibid.). What followed were cheaper credits and more favourable credit modalities in general. Turkey's farmers reacted to the aforementioned incentives with a fourfold increase in credit uptake: whereas credits amounted

to 5.29 million TL in 2002, they rose to 22.1 million TL by 2012 (Government of Turkey April 2013).

6.6 Land policy and sales restrictions

At the time of my fieldwork, the Federal Ministry of Food, Agriculture and Livestock considered land fragmentation and the predominance of smallholder agriculture to be among the most important structural problems in Turkey's agrarian sector (Government of Turkey April 2013). The problem of land fragmentation in Turkey is closely linked to the country's inheritance law (in Turkish: *miras*) which implies that all offspring have the right to an equal share of inherited land and that inheritance is to be compensated at market price (ibid.). In practice, the *miras* law implies that, given the higher birth rate in South-east Anatolia, agricultural land is continuously further subdivided from generation to generation. This trend is further aggravated by the fact that smallholders are often too poor to compensate those family members entitled to an "equal share" and the fact that economic incentives outside of farming are often lacking.

During my time in the field, a new inheritance law was drafted to support a policy aimed at anti-fragmentation. In 2007, updated legislation to prevent further land fragmentation went into force (Government of Turkey April 2013). The scope of this new legislation, among other things, set a threshold for "indivisible parcel size", that is, the minimum size for an agricultural plot that could be sold. In other words, parcels smaller than this minimum threshold could not be further subdivided (ibid.). In practice, this meant that plots used for special agricultural products or marginal agricultural lands smaller than two hectares (20 decare[24]), cultivated plots of less than 0.5 hectares, and land used for greenhouse production of less than 0.3 hectares could not be further divided and sold (ibid.).

6.7 Land consolidation

A second major land-related policy with significant effects on land holdings, land use and land prices, was the land consolidation programme (Government of Turkey April 2013). Land consolidation is primarily understood as a measure designed to prevent a high degree of stratification of land parcels under a given title, as it changes the number of parcels per title, average parcel size and shape. Land consolidation however also facilitates certain land-use patterns over others. Particularly favoured are those patterns based on the use of large

[24] Turkish agricultural statistics often refer to the subunit "decare" rather than to hectare. Similarly, Turkish farmers frequently refer to decare or "dunam" (in Turkish: *dönum*) when discussing land size. 1 decare equals one tenth of a hectare.

machinery, which again allow for considerable increases in productivity and the price of land due to improved technical access.

Land consolidation policies are not new to Turkey; they harken back to recurring attempts for wider land reform that began in the early 1960s (Government of Turkey April 2013). But despite this long history of attempted consolidation and repeated attempts to initiate land reform, land consolidation in Turkey proceeded slowly (ibid.). Between 1961 and 2002, only 450,000 hectares of land had been successfully consolidated. In the years just prior to the period under review, land consolidation began to accelerate, so that, between 2003 and 2012, an additional three million hectares of land were consolidated (ibid.). Analogous to the extremely high ambitions it displayed in other areas of agricultural policy, the Turkish government anticipated that its ongoing efforts would eventually result in one million hectares of land being consolidated each year (ibid.). In the GAP region alone, some 2.2 million hectares were ultimately to be consolidated (ibid.).

In Mardin and in all other GAP provinces, land consolidation coincided with investment in rural infrastructure such as building and maintaining roads, providing water and sanitation, as well as irrigation-related infrastructure like drainage. For Mardin, the GAP's 2008 plan cited three consolidation projects which were intended to consolidate a total of 117,581 hectares of land (Government of Turkey May 2008). At the time of my fieldwork, land consolidation and concentration were used officially as a marketing argument to draw domestic and foreign investors to the Kızıltepe plain. However, the Turkish authorities engaged in land consolidation efforts also faced a range of impediments. I was told repeatedly that, apart from the aforementioned inheritance law, attempts to consolidate were frequently hindered by land banking (speculation), incomplete land registries or widespread reluctance among farmers to cooperate with government authorities.

6.7 The rural development support programme

The rural development support programme (RDSP) of 2006 was designed to "foster the integration of agriculture and industry" (Government of Turkey April 2013). The RDSP included different types of financial support for investment in areas such as processing, packaging, wrapping, or storing of agricultural products, as well as for the purchase of machinery but, most notably, for building on-farm irrigation systems (ibid.). Among the main incentives offered by this programme were a 50-per-cent grant for investments in technical means to further agricultural intensification, such as mechanisation and irrigation (Government of Turkey April 2013). These grants meant that farmers only had to pay half of the actual market price for newly acquired machinery. And, the half that farmers did have to pay could be covered by a loan for the investment offered interest-free for a period of five

years (ibid.). In conjunction with the earlier mentioned value-added tax exemptions, customs' duty exemptions and credits for the purchase of machinery, the 50-per-cent grants added significant support to already highly incentivised transactions.

Irrigation investments received particular emphasis and support within the scope of the RDSP. Ziraat Bankası provided loans for five years at no interest for anyone investing in on-farm groundwater irrigation (Government of Turkey April 2013). Irrigation investments made collectively were supported by grants up to as much as 75 per cent of investment cost (ibid.). Eligibility to receive RDSP financing was in general contingent upon an individual's creditworthiness, cash endowments and other assets for securing a mortgage; however, it was also contingent upon minimum-sized landholdings and official registration. Accordingly, the RDSP package was only offered to landowners with holdings of 200 or more decares; farmers with smaller plots were formally excluded from this support even if they had the other required capital endowments.

The total amount of support provided to Turkey's farmers through the RDSP was around 1.5 billion TL (Government of Turkey April 2013). The RDSP in conjunction with earlier mentioned incentives and subsidies had considerable effects impacts on Turkey's agricultural development. Between 2006 and 2012 around 3,965 new processing facilities were constructed (ibid.). The Ministry of Food, Agriculture and Livestock financed this through grants amounting to a total of 772 million TL (ibid.). Investments for machinery were similarly extensive, amounting to 718 million TL in grants for the purchase of over 180,000 machines and related equipment between 2007 and 2011 (ibid.). A report summarising the success of the RDSP spoke of an area of 400,000 hectares that were opened to irrigation as a result of the grant system (Government of Turkey April 2013). In particular, farmers in Kızıltepe made extensive use of the incentives offered, leading to a boom in irrigation on the plain. (This is discussed in greater detail below in subsequent sections.)

From 2009 onward, the RDSP was complemented by the Rural Development Plan (2010–2013) which aimed to improve the working and living conditions of Turkey's rural population and to enable sustainable development (Government of Turkey April 2013). The plan came into force in August 2010. The budget comprised 27 billion TL (ibid.). For Mardin, the development plan was intended to fund 125 enterprises directly and to support new investments worth about 15 million TL (Government of Turkey May 2008).

6.8 The South-east Anatolia Project Action Plan for Mardin 2008–2012

The South-east Anatolia Project (GAP) action plan assigned a total of 11.5 billion USD of central budget money to invest in the provinces comprising the GAP area (Government of Turkey May 2008). About 8.5 billion of this were earmarked for agrarian support and reform

(ibid.). The lion's share of this government funding — around 6.7 billion USD from the central budget and another 1.5 billion from extra-budgetary sources of financing — were allocated to finalising the remaining GAP irrigation projects (ibid.). Around 453,000 million USD were made available to support other areas related to the development of the agricultural sector, such as extension and land consolidation (ibid.). The remaining 1.4 billion USD of central budget money were designated for investments in energy and transportation, as well as in the social and physical infrastructure of Turkey (ibid.). Although this latter development funding was not specifically earmarked for agriculture, it can be argued that Turkey's agrarian sector nevertheless benefitted from it indirectly.

As part of the Action Plan, specific goals were identified and set for the GAP region's individual provinces including Mardin and the Kızıltepe plain. From 2011 to 2013 the GAP scheme had thus prioritised completion of the main canal, Mardin-Ceylanpınar, from Atatürk Dam all the way to the Kızıltepe plain (Government of Turkey May 2008). The 136-km long Mardin-Ceylanpınar canal was designed to serve an area of 94,929 hectares with water from the Euphrates River (ibid.). Although completion of the canal had initially been scheduled for 2012, by the time of this writing, this had yet to be accomplished. The Mardin-Ceylanpınar canal will constitute an extension of the canal already in operation that diverts water from the Euphrates to the Bozova and the Harran plains in Şanlıurfa.

The plan was that the Kızıltepe plain would receive water from the canal at two distinct locations: the first would be the Mardin-Ceylanpınar irrigation network in the western part of the plain, servicing around 67,106 hectares of land; the second location would be the site of the Mardin gravity storage system in the north-western part of the plain, serving 27,883 hectares (Government of Turkey May 2008). In addition to these 90-plus thousand hectares to be irrigated through the main canal, the GAP scheme also included the Mardin-Ceylanpınar Groundwater (YAS) irrigation network which, when implemented, would service some 111,939 hectares of land (ibid.). Altogether the GAP scheme proposed to bring 200,000 hectares of land in Mardin under irrigation.

The construction of irrigation canals, roads and other types of infrastructure would occur in conjunction with a process of expropriating private land. For example, private farmland would have to be expropriated in places where the canal itself would traverse, and where other physical infrastructure servicing the canal would have to be built. A particularly large area to be expropriated lay just to the north-west of the town of Kızıltepe. Here, a large lake was to be created to serve as a reservoir and an integral part of the gravity storage system (see above). The area to be inundated included the village of Boyaklı and its surrounding fields.[25] When I

[25] At the time of writing, the village of Boyaklı had already been evacuated and the area flooded. Recent satellite images show a large reservoir lake where the village had once been located.

visited Boyaklı in 2012, monetary compensation for expropriation and relocation had become a hot topic of conflict and debate. Recompense was promised for land and other fixed physical assets. Farmers facing expropriation were bitterly engaged in negotiating the amounts to be paid them by Turkish government authorities. Farmers did everything in their power to demonstrate the worth of their property or to increase its value in order to target higher compensation payments. For example, I encountered people in the village busy planting fruit and pistachio trees, painting their homes and setting up small shacks or buildings with appropriate signs claiming that these often hastily built and rickety constructions were stores, bars or offices, respectively. The reason for these endeavours, I was later told, was not that the people of Boyaklı speculated on a future in the village, but rather that they wanted to seize the opportunity to raise their property values, with a view to targeting higher compensation, in the wake of the inevitable expropriation of their land and other stationary physical structures.

The map below (figure 3) shows the areas awaiting the finalisation and/or the establishment of new irrigation projects in the GAP area as of 2012. The south-western corner of Mardin coloured in orange is designated as an area where projects are either "in planning and/or in finalisation". This area coincides almost entirely with the Kızıltepe plain.

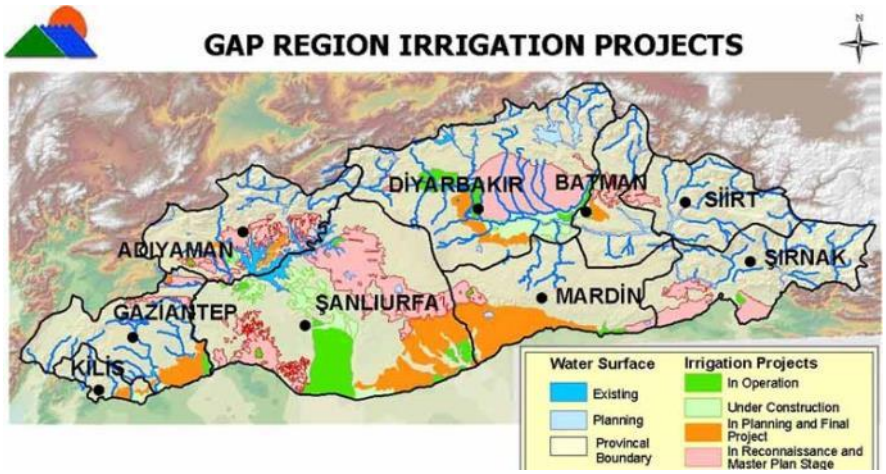

Figure 3: Progress of GAP irrigation projects as of 2012[26]

According to one of my interviewees in the local GAP administration, it was envisioned that the GAP would not only provide large areas of newly irrigated land, but that it would also secure access to water in areas already irrigated. The latter aspect, according to my interlocutor, was becoming increasingly crucial as privately owned and operated groundwater irrigation facilities had already caused a massive drop in the water table in many areas. The

[26] Source: Official GAP website (http://www.gap.gov.tr/en/index.php).

consequences of this fall in the groundwater level were felt by the farmers who, in turn, were forced to use ever more energy to pump the water to the surface.

Apart from the irrigation projects just discussed, considerable investments were further promised with respect to transport infrastructure, most notably road construction and maintenance. Related investments in Mardin comprised highway construction plans including a stretch of 50 km between Viranşehir and Kızıltepe, a stretch of 72 km of highway as part of a 351-km-long Şanlıurfa-Kızıltepe-Silopi highway project (Government of Turkey May 2008). Further to the east, a stretch of 56 km of highway was planned to facilitate the connection between Kızıltepe and Nusaybin (ibid.). Furthermore, several already existing highway connections such as the highway from Mardin to Diyarbakır-Mardin would be made multi-lane in order to overcome bottlenecks and to respond to the envisaged boom in economic activities (ibid.)

6.9 Summary

The previous discussion shows how the Turkish state implemented a whole package of various policy measures to achieve its development goals during the period under review. Under the various interventions, billions of USD were invested, particularly in south-east Anatolia. The measures the state had selected sought to change very specific sub-areas of agriculture. The ultimate goal of the state's measures was to achieve a profound and extensive transformation of the agrarian sector in line with its highly ambitious development goals. Many of the measures the state imposed aimed to alter and improve the cost–benefit ratio for agricultural producers; other measures aimed to establish specific rules, standards and legislative procedures. Taken together, many of the strategies that were chosen correspond to approaches that are typical for state-controlled agricultural development programmes in other parts of the world (as discussed in chapter 2). Other measures were specifically tailored to the precarious social and economic context of south-east Turkey.

7 The Kızıltepe plain

The following chapter introduces the reader to the social and geographical context of my case study, the Kızıltepe plain, in the south-eastern province of Mardin. The ultimate goal of this undertaking is to describe the context that the mechanisms of state intervention (explained in the previous chapter) encounter and ultimately seek to change. To use the words of Tania Murray Li (2007) I endeavour to explore "the forces and vectors on historically configured terrain" (p. 28). The case description is based on interview data as well as on a review of secondary literature and statistics. By using the interviews as my primary source, I try to achieve a description which corresponds as nearly as possible to the personal views and assessments of my local target group, namely, the different members of the local agrarian community.

The first part of this chapter describes Kızıltepe's wider social, economic and political context. Particularly important aspects are the region's cultural and ethnic diversity, and its long history of economic deprivation, political violence and instability. This wider context is crucial because it influences people's daily lives on the Kızıltepe plain so strongly, and also because it represents a decisive factor for how state–society relations play out in the region. Finally, it is precisely these state–society relations that interest us because they influence the design and the implementation of agricultural development schemes in South-east Anatolia.

The second part of this chapter provides a detailed description of Kızıltepe's rural community and agricultural sector. Key aspects discussed in this regard are Kızıltepe's agroecology and its implications for prevalent production patterns. Further, key features of village life and rural class structure on the Kızıltepe plain are also described. In so doing, the distribution and control of material assets and political power in the rural areas are revealed, and patterns of land and asset ownership are reflected on and discussed. Finally, a number of important institutional arrangements governing the social relations of production will be explained.

7.1 Kızıltepe's social, economic and political context

My case study for this project is set in the Kızıltepe plain in the south-eastern Anatolian Province Mardin (figure 4). The Kızıltepe plain is situated right at the southern fringe of the Taurus mountain range and just west of the Tigris river catchment. Kızıltepe's fields are overlooked by the historic town of Mardin, a settlement whose foundations reach back to 4,000 BC making it one of the oldest in the Middle East. At its heart, some 20 km south of the town of Mardin, the Kızıltepe plain is intersected by the southern route of the historic Silk Road (in Turkish: *Ipek Yolu*). On a wider geographical scale, the Kızıltepe plain constitutes a small part of the northern tip of Mesopotamia, a region widely considered as the cradle of

sedentary agriculture (Harari and Neubauer 2013). The plain itself extends over an area of nearly 1,600 km^2 of flat fertile land. The plain is subdivided into three provincial districts called Ilces Kızıltepe, Derik and, somewhat smaller, Mardin Merkez. The southern fringe of the plain coincides with an 80-km strip of Turkey's international border with Syria. In 2012 the Kızıltepe plain was home to around 300,000 officially registered inhabitants whose livelihood depended to a large extent on different forms of employment in the agricultural sector and other associated economic sectors.

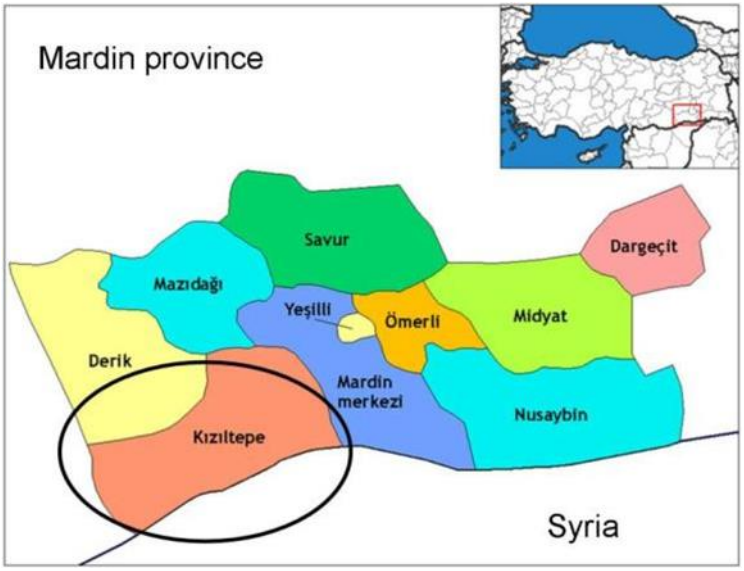

Figure 4: The South-east Anatolian province Mardin with its ten districts[27]

Mardin Province to which the Kızıltepe plain belongs is one of seven provinces of the South-east Anatolia (*Güneydoğu Anadolu*) region. For many decades, South-east Anatolia has been the poorest and politically most insecure region in Turkey. The precarious situation still affects almost all areas of life today. Thus, South-east Anatolia continuously occupies the bottom ranking for social parameters such as access to employment, education, and health care or to justice (Buğra and Yılmaz 2016).

7.1.1 Poverty and political turmoil

The economic problems of the region and the struggle of its inhabitants were omnipresent at the time of my field research. A glance at labour market and income statistics from the corresponding years provides an impression of the conditions that I encountered in the field. In 2014 South-east Anatolia was ranked first place in Turkey for its (the province's) having the greatest share of its population living in poverty, at rates ranging between 30 and 32 per

[27] Source: https://www.wikipedia.org/.

cent (Buğra and Yılmaz 2016). As a comparison, in the prosperous western and northern regions of the country, the share of those living in poverty was only at 4 and 2 per cent, respectively, in the same year (ibid.). Similarly, employment statistics for 2014 ranked the South-east and especially Mardin with its staggering 24 per cent unemployment rate as last on the employment scale among all of Turkey's provinces (Buğra and Yılmaz 2016). Although formal employment opportunities were scarce, large segments of the labour force — especially women — were often employed in different forms of unpaid labour or low-wage jobs. In Mardin, people who did have access to a formal employment often had to be content with incomes far below the average level of those for persons in other Turkish regions. Furthermore, South-east Anatolia exhibited striking income inequality among its population, corresponding to a Gini-coefficient of 0.39 for the year 2011 (Buğra and Yılmaz 2016).

The South-east Anatolia's economic problems are closely linked to decades of political instability and violent conflict in the wake of the Turkish state's conflict with the PKK. In my interviews, my interlocutors commonly referred to the conflict as the most important cause for the region's prevailing impoverishment, its difficult labour market situation and the lack of significant private-sector investment in the region. In addition to the rampant poverty that affected large parts of the population, people repeatedly reported very personal and far more dramatic consequences. My interlocutors in Kızıltepe and other parts of Mardin informed me regularly about relatives and acquaintances who had become victims of the conflict — be they as members of the Turkish military, as PKK fighters or as innocent civilians. Furthermore, it was frequently reported that people were often harassed and/or imprisoned for political reasons, or that they were under surveillance by the Turkish secret service. In fact, after speaking to members of the BDP in Kızıltepe, my translator was advised that all of us were also under police surveillance and that further interviews with pro-Kurdish activists could put our work in jeopardy and possibly ourselves at risk. For outsiders, too, there were many visible signs of the latent conflict. For instance, one could regularly encounter military convoys and heavily armed anti-riot vehicles in the streets of Kızıltepe, the town of Mardin or in the Turkish–Syrian border town of Nusaybin.

Political oppression and mass imprisonments were a prominent feature in the public eye at the time of my fieldwork in 2012: the Turkish state had just detained around 10,000 civilians who were alleged to have contact to the PKK, in the context of the government's so-called KCK operations from 2009 to 2011. In Mardin, leading representatives of the local pro-Kurdish BDP government, including the Mayor of Kızıltepe, had been imprisoned due to alleged contacts with the PKK.

The circumstances and consequences of the Kurdish conflict were already outlined above and discussed briefly in chapter 3. Moreover, there are a plethora of academic publications that

cover the development and complex nature of this conflict in significant detail (e.g. MacDowall 1992; Dunn 1995; Yavuz and Özcan 2006; Sönmez 2008; McDowall 2010); therefore, it suffices to emphasise that the Kurdish conflict, which is still unresolved today, has been a decisive influence on the precarious economic, social and political situation of the people of Mardin and the people in the region as a whole. In the meantime — in addition to this mainly home-grown Turkish-Kurdish conflict — by the end of my field research in 2012, the Syrian civil war had escalated to the point of its having far-reaching consequences for the South-east Anatolia region as well.

7.1.2 Ethnic diversity and local culture

A distinctive feature of Kızıltepe — and of the province of Mardin as a whole — is the diverse ethnicity[28] and cultural background of the population, which contrasts strongly with the populations of central and western Turkey. Ethnic Turks in Mardin Province are a minority vis-à-vis a majority of Kurds and several other ethnicities. In the census of 1990, Kurds represented roughly seventy-five per cent of Mardin's population (Strohmeier and Yalçin-Heckmann 2010). The second largest ethnic group in Mardin were (and are) Arabs, constituting approximately fifteen per cent of the total population; ethnic Turks therefore represent under 10 per cent of the regional population (ibid.).

Many of the ethnic Turks I met and talked to, had moved to the region to work as civil servants, not very long before I had begun my fieldwork there.[29] In general, those who had agreed to work in the South-eastern provinces were compensated by the state with extra allowances, top

[28] Seymor-Smith (1986) defines as ethnic "any group of people who set themselves apart and are set apart from other groups with whom they interact or coexist in terms of distinctive criterion or criteria which may be linguistic, racial or cultural. … [E]thnicity may be objective or subjective, implicit or explicit, manifest or latent, acceptable or unacceptable to a given grouping or category of people. Paradox and ambiguity often characterize ethnic designations, tying such designations to ideas about culture, society, class, race, or nation" (Seymour-Smith, 1986: 95–96). In the context of Turkish society, a clear demarcation and quantification of different ethnic groups is sometimes difficult to achieve and even more so disputable. On the one hand, adding to the general ambiguity of the term "ethnicity", is the frequent blurring of ethnic boundaries due to the historical mix of the population. For example, many people speak of themselves as both Turks and Kurds. On the other hand, after decades of repression and stigmatisation of Kurds and other minorities by the Turkish state, ethnic affiliation is at times disclosed only reluctantly. Data on ethnic affiliation are therefore often an expression of the current political climate and political positions. For example, nationalist Turks have the tendency downplay the number of Kurds living in Turkey. Kurdish nationalists, on the other hand, often portray the Kurdish population as particularly large. To avoid the pitfalls of this debate, I only speak of ethnic Turks, Kurds or Arabs in connection with my interviewees, if they have explicitly made this assignment themselves to themselves.

[29] Several of my interlocutors explained that for ethnic Turks from the western parts of the country moving to the South-east is seldom a preferred choice as the region is associated with a low standard of living, political insecurity and a traditional and religiously conservative local culture. Civil servants –particularly those at early career stages-, so I was told "have only limited say" with respect to their place of employment and spending time in the South-east and East of the country is "an inevitable evil on the way to employment in the prosperous Western provinces".

positions, inexpensive housing and the promise that they would eventually be transferred back to one of the western Turkish metropolises like Istanbul, Ankara or Izmir. Ethnic Turks in Mardin were said to hold leading positions in educational institutions, local administrations, the police and the military. In contrast, the lower-echelon civil service jobs, I was told, were filled predominantly by provincial locals, many of whom were Kurds. Although these statements were not empirically verified, the preponderance of the narrative nevertheless points to a widespread assumption that the central state is largely represented by actors who are strangers to the region and its people.

The town of Mardin has traditionally been a stronghold of South-eastern Turkey's Arab minority. Most of the shops and restaurants in the city are run by ethnic Arabs. In contrast to the town of Mardin, however, many of the rural areas including the villages and other tiny urban communities on the Kızıltepe plain are almost exclusively inhabited by Kurmanci-speaking Kurds. Moreover, Kurds also make up the majority of the residents in the rapidly growing "agro-town" of Kızıltepe (in Kurmanci: *Qoser*) which is located directly on the Silk Road some 20 km to the south of the town of Mardin. The term "agro-town" indicates that most of the town's inhabitants are either directly or indirectly involved in agriculture. Kızıltepe's residents thus comprise large, wealthy and medium-sized absentee landowners; peasants with smaller holdings; traders of agricultural inputs like fertiliser, machinery and pesticides; traders and middlemen for agricultural commodities, and agricultural wage labourers, among many others. Because of its optimal location on the Silk Road — the province's main artery of regional and interregional trade — the town of Kızıltepe has evolved into the centre of the province's thriving agri-business, in recent years. In fact agriculture absolutely dominates the townscape: the streets are lined with advertising banners for agricultural machinery, pesticide brands and agricultural loans; trucks and other transport vehicles rumble constantly through the narrow streets of Kızıltepe's centre, fully loaded with grain, cotton or animals, or on their way out, in the direction of Mardin Merkez or Şanlıurfa; the sidewalks are crowded with shops selling fertiliser or spare parts for agricultural machinery, and men in working clothes who populate the local cafés.

The numerical dominance of ethnic Kurds on the Kızıltepe plain means that Kurdish is the language predominantly spoken. However, this does not mean that Turkish is altogether excluded. In many conversations that I witnessed, people would often resort to a mixture of Kurmanci, Turkish and Arabic. Nevertheless, the more time I spent in Mardin's rural areas, the more it appeared that, although Turkish is primarily the official language. Kurmanci is the choice for language used in everyday informal situations, in the streets, in the field, and among family members and friends. This observation was further underscored by one of my interviewees who informed me that, for the people on the plain, Kurmanci is the preferred language for expressing personal concerns, opinions and emotions.

7.2 Agriculture in Kızıltepe

I now turn to a detailed description of Kızıltepe's agroecology, its agricultural sector, and the people working in agriculture. Keeping the overarching social and economic context in mind, this extended second subchapter is intended to illustrate, first, the context-specific expression of agricultural production on the plain and, second, associated with this, a number of decisive everyday interactions and transactions that occur within Kızıltepe's agrarian community.

7.2.1 Agroecology and production patterns

Kızıltepe's agroecology is characterised by an extremely dry, semi-arid climate. Whereas Kızıltepe's winters are comparatively mild and moist with, temperatures only very seldomly dropping below 0° C, its summers are more ferocious, with temperatures frequently reaching 45° C and above. From April to October, there is hardly any precipitation at all. Combined with searing temperatures and occasionally strong winds, Kızıltepe's summers are further characterised by severe water shortages. The soil on the Kızıltepe plain, however, is considered to be extraordinarily fertile. Moreover, much of the Kızıltepe plain is almost completely flat and free of rocks. These are conditions which make agricultural crop cultivation comparatively easy and desirable.

Mardin's regional climate can be understood as the historically most important ecological constraint for agricultural production in Kızıltepe. For centuries, the water shortage has been the most important limiting factor for agricultural production on the plain. Up until the late 1990s, the little water available for agriculture and other human uses came exclusively from winter rains and a few small creeks flowing onto the plain from the mountains north of the town of Mardin. Water shortages during summer necessitated long fallow periods during which no significant crop cultivation was possible and Kızıltepe's fields served only as pastures for goats and sheep.

In autumn, with the arrival of rain, the animals were driven into the mountains and the fields were sown and worked. The most important crops produced were drought-resistant species such as lentils and sorghum. However, the production of durum wheat has also been historically particularly important.

During consecutive phases of my project fieldwork between 2011 and 2013, I observed that groundwater was used for agriculture throughout the whole year. The consequences of this and other changes have been far-reaching and include the introduction of new cash crops such as cotton and maize, and the displacement of extensive livestock production. This shift from historical extensive production to the current intensive production, which lies at the core of this work, is described and discussed in detail in the following subsections.

7.2.2 Village life

Kızıltepe's rural society is organised in small village communities – the size of these settlements ranging from around one hundred inhabitants up to a few thousand. Unlike what is typical for rural areas of northern Europe or the United States, in Kızıltepe, single, detached farmsteads on clearly demarcated and fenced-off private land are quite rare. Instead, Kızıltepe's villages are made up of tightly huddled-together structures whose few windows mostly face inward onto small enclosed courtyards (see photos from the field in appendix I). Between these village structures there usually runs a maze of narrow, unpaved paths. Each village is surrounded by the farmers' arable land. Because there are no fences or other types of visible demarcation, for an outsider not familiar with the area it would be impossible to determine, just by looking, exactly where village territory begins or ends, and which plots of land belong to which individuals.

Villages on the Kızıltepe plain also have no clearly identifiable centres. There are no main squares, no greens and no major representative buildings that could function as official public gathering places. Exceptions to this can be found in a few of the larger villages which do exhibit a kind of "public infrastructure" in that they may have a cemetery, a mosque or sometimes a tiny a teahouse or tea room. Compared to western Turkish living standards, village life in Kızıltepe is very simple. In many cases even main roads connecting villages to the outside world may not actually traverse them: such roads either stop right at the village outskirts or, if the roads continue, circumvent the villages altogether. The reason for this, so I was told, is that many of the main roads were established far more recently than the villages which are sometimes centuries old. In previous times, before these more recent roads were built, one had to cross open country over long distances to get from one village to another or to a fortified road. There is no public transportation between villages or from the villages to towns and cities and back. Whereas fleets of private minibuses operate along the main roads, no such transportation is available to outlying villages which must be reached on foot, by horse and wagon or, if available, motorbikes and or cars. Small, impoverished villages have no direct access to educational facilities or medical facilities; they are without police or any other public service. Remote villages that lie at some distance from the Silk Road are often even cut off from access to retailers or petty traders. In remote places like these, gardening and herding still play a major role in the subsistence of rural communities.

Housing on the Kızıltepe plain is for the most part very basic. The buildings in the villages are almost exclusively one storied and either constructed from low quality clay bricks and other cheap inputs or even built based on a traditional mixture of large fieldstones, clayish soil and straw (see photos from the field, appendix I). Up to 2011, a majority of villages on the plain had no direct access to water, sanitation, electricity or waste management. However,

according to local members of the ruling AKP, by 2012, just a year later, only seven to ten per cent of such settlements were still without those basic public services. Plans called for the provision of basic public services area-wide by 2013, and many of my interviewees confirmed that their villages had recently been given access to such services. At the same time, during my field trips, I visited a number of villages where no such improvements had been made. There were a few exceptions, of course, with respect to the quality of housing and to access to comforts like water sanitation and electricity: wealthier, large and medium-sized landowners had better quality dwellings and, unsurprisingly, found ways to acquire services that their poorer neighbors were still having to do without.

Although the social status of village inhabitants, at least for outsiders, is not easily recognizable, there is nevertheless a stark social divide and hierarchical structure in some villages, which in turn shapes community life and coexistence. A description which matches my own interpretations in this regard is given in Paul Stirling's (1965) observations of village life and rural identity in the central Anatolian province of Kayseri half a century ago:

> *"All households [...] appear at first sight to live in much the same way. [...] The wealthiest [...] households have a comfortable sufficiency, while the poor are badly housed and clothed [...]. But though differences in wealth are not conspicuous in the way of life, they are of great social importance. The rich are the leaders of the village; they receive deference, carry weight in village counsels, employ their neighbours, and are able, by gifts and loans, to exercise influence and even direct control, especially among their own kin" (Stirling 1965: 29).*

7.2.3 Rural class structure and the composition of village communities

The discussion thus far has pointed to a range of structural conditions that are common to all rural communities on the plain. Apart from those shared features, however, one must also account for a number of decisive differences. The first step in so doing is to differentiate between villages with respect to the composition of their inhabitants and their property relations. Based on Özer's (1998) account of rural social structure in South-east Anatolia, village communities on the Kızıltepe plain can be differentiated into four general categories: namely, landlord villages, tribal villages, farmer villages and mixed villages.

Landlord villages. In landlord villages all land and all other physical assets, most notably buildings and machinery, are owned by a single wealthy landlord (Agha or Ağa). In landlord villages, apart from the landlord's household and kin, the village is otherwise inhabited by a fluctuating number of landless wage labourers. These landless labourers and their families work under a variety of institutional agreements either as agrarian labour, household servants

or guards. What is important to note is that ownership is not simply limited to material wealth. Based on the social history of the region and the fact that a large part of the village population — the landless class — owns virtually nothing, this arrangement represents a kind of all-embracing ownership which traditionally extends to the landless members of the community. Thus the relationship between landlord and his landless employees is actually one of serfdom.

At the time of my fieldwork, many rich landlords had become absentee landowners as they preferred the comforts of city life to life in the village. Absentee landlords would typically leave only a custodian and a group of hired workers behind in order to take care of their property and cultivate the land. In other cases, the absentee landlords would abstain from practicing agriculture altogether and simply rent their land to small- and middle-sized farmers. But regardless of the preferred option, with the out-migration of the landlord and his kin, these villages remain inhabited by only a fraction of their former population.

Tribal villages. The second village type described by Özer (1998) is the "aşiret village" in which all surrounding arable land and almost all other physical assets are owned by families who belong to a tribe (*aşiret*). In aşiret villages, the majority of inhabitants, excluding the tribal family landowners, are also landless wage labourers. Aşirets often own not one, but several villages and large areas of land. Altan Tan (2011) identifies a total of 40 aşirets in his study of Mardin's tribal societies, with the aşirets *Xelecan*, *Tat*, *Arbani*, *Qelendara* and *Kikan* being particularly represented in the Kızıltepe plains area (Tan 2011).

Kurdish tribes represent a unique peculiarity, with this particular form of social organisation found only in Turkey's eastern and south-eastern regions. The Kurdish tribes of South-east Anatolia are viewed ambiguously. Aşirets are often rejected and criticised because of their role as patronage-based authorities and their sometimes mafia-like associations which tend to fill the power vacuum in the south-eastern Turkish provinces and operate as a state within the state. In fact, numerous academic studies indicate that both the historical and the current role of the Kurdish tribes are closely linked to the territorial power politics of the Turkish Republic and its predecessor the Ottoman Empire (e.g. Klein 2011; Kraus 2004; MacDowall 1992).

Kurdish tribes have been used for centuries as a means of indirect rule to control the local population and to defend the country against external enemies. In more recent times, individual tribes have served as a locally anchored, paramilitary counterweight against the PKK. From this empowerment of the Kurdish tribes, however, a dependence and vulnerability of the central state has also arisen, which the tribes, in turn, have been able to exploit for their purposes (e.g. Klein 2011; Kraus 2004; MacDowall 1992).[30]

[30] Like any centralist political state Turkey is characterised by a strong concentration of political power in the nation's capital, Ankara, with comparatively weak political representation, budgetary freedom and decision-making power at provincial and local level. Local governments at district, city or town and village level

Even today individual Kurdish aşirets have significant economic and political power. Aşirets like the Xelecan, the Tat or the Kikan count several thousand tribal members, some closely related, others very remotely related. Individual tribal leaders, according to their own statements, are able to mobilise thousands of people for their purposes within a very short time if necessary — be it to achieve security and clout in the event of a conflict, or to gain strategic, party-political loyalties in service to their own cause. The Kikan aşiret, for example, whose territory includes the villages in the immediate vicinity of the town of Kızıltepe and numerous villages south of the Turkish–Syrian border, allegedly controls about 140,000 hectares of agricultural land. Leading members of the Kikan aşiret are active in local and national politics as well as in various economic sectors not limited solely to agriculture. The representatives of Kızıltepe's tribes often strive to project a modern, positive image. For an interview with an Ağa of the Kikan Aşiret, I was invited to a modern office in the town centre of Kızıltepe. Dressed in a suit and tie, with a pistol in his belt and heavily protected by six bodyguards — as both an expression of power as well as perceived endangerment — my interviewee was striving to present himself as a cosmopolitan businessman whose economic activities not only contribute to the social welfare of the community, but also benefit the district and the province as a whole.

To resume my discussion of different village types, the exact number of agha villages and aşiret villages in Kızıltepe is difficult to determine because there are no reliable statistics available. Also, the term "aşiret" is anything but precise in daily use. I personally observed that, in everyday usage, the category of aşiret (tribe) is often interchanged with the categories of "clan", "lineage" or even "extended family" (in Kurmanci: *malbat*). This observation is confirmed by van Bruinessen (1992) who stresses that the concepts of tribe, clan, lineage and family as they are generally used in social anthropology are problematic if applied to Kurdish social reality.

The differentiation between landlord and tribal villages, proposed by Özer (1998) becomes quite complicated because Kızıltepe's landlords are often at the same time aşiret leaders. Of my four interviewees representing the group of landlords with large holdings, three were, accordingly, both landowners and Kurdish tribal leaders. In local jargon, "large landowner"

depend on financial support and legislative guidance by higher levels of government and administration. Mardin (1973) argues that for the central state the concentration of power and political control comes with comparatively greater responsibilities and efforts needed in order to make its policies a local practice. With increasing physical and social distance to the center, the centralist state runs the risk that its political control and influence diminishes (ibid.). In Ottoman history, but also to a lesser extent in post-Ottoman Turkish history, inaccessible parts of the state's territorial periphery were at times under the de-facto rule of local warlords, aghas and sectarian leaders (van Bruinessen 1992). One of many consequences of this dependency is the proliferation of deep and enduring patron–client relations between representatives of the political center and actors in the nation's territorial periphery (Klein 2011). Mardin (1973) argues that "the confrontation between center and periphery was the most important social cleavage underlying Turkish politics and one that seemed to have survived a century of modernisation".

and "tribal leader" are frequently referred to synonymously as "Agha" (or Ağa).[31] Even attempting a rough estimate of how many villages fall into which category therefore becomes a challenge, with widely varying statistics. According to statements by a leading staff member of Mardin's provincial agricultural administration (Tarım Il Müdürlüğü), approximately 20 to 25 per cent of the villages in Mardin belong to those first two categories. But other interlocutors claimed that the number of these village types was much higher, that is, around 60 to 70 per cent. What is undisputed is that, compared to the rest of Turkey, Mardin's high share of landlord and tribal villages is matched only by that of the neighbouring province of Şanlıurfa.

Farmer villages and mixed villages. The third category in Özer's village typology are "farmers' villages". Farmers' villages are composed of individual small- and middle-sized landowners, none of whom have distinct tribal affiliations. Like the examples above show for the other types of villages, landless wage labourers often constitute the majority population in farmers' villages. In these villages, land and other property are distributed comparatively equally, as long as the villages are inhabited only by smallholders or only by middle-sized farmers, but not by both. If both medium- and small-scale farmers belong to the village community, then there will be a social gradient that can be regarded as a central influencing factor for village life and local agricultural production. Farmers' villages represent the numerically most important village type next to landlord and tribal villages. Özer's fourth category, "mixed villages", refers to very heterogeneous communities in which representatives of all of the aforementioned groups live side-by-side. On the Kızıltepe plain, mixed villages are the exception rather than the rule.

Landless village population. The discussion up to this point suggests that, in addition to the groups mentioned, landless agricultural workers also make up part of every village's population. It should be noted that until recently the number of landless farmworkers and smallholders present was characterised by strong seasonal fluctuation, resulting from the fact that smallholders and landless wage labourers would leave their respective families and villages in off-seasons, in search of wage labour elsewhere. Before widespread groundwater irrigation was introduced, seasonal labour migration during the summer months would regularly cut village populations in half. During planting and harvesting times, village populations would again increase due to the influx of hired labour and the return of family members.

[31] On the one hand, this shows that in reality landownership and political power often go hand-in-hand in Kızıltepe. On the other hand, this practice of denomination creates a certain degree of ambiguity for the outsider.

7.2.4 Patterns of ownership and control

A second useful way to further describe Kızıltepe's agrarian society is to differentiate actors based on landownership. As Manning Nash (1966) noted, "[i]n most societies land tenure is merely the geographical expression of social structure" (p. 34). To differentiate prevalent types of landownership, a standard subdivision into four major classes—viz., large landlords, middle-sized landowners, smallholders and landless labourers—is used. The fact that class distinctions are sometimes too stark a simplification of peoples' social realities is something that must not go unheeded despite this categorisation. Particularly among Kızıltepe's rural poor, class boundaries are much less clear-cut than what might be expected.

The group of Kızıltepe's large landlords comprises landowners whose holdings range from 1,000 decare (100 hectares) up to 20,000 decare (2,000 hectares) and sometimes more. In 1991, large landowners represented only 0.8 per cent of all landowners in Mardin (figure 5). These 0.8 per cent of landowners controlled 26.7 per cent of the total land area (figure 6). This equalled 741,590 decare or roughly 75,000 hectares of arable land (figure 7). According to another census by the Republican People's Party (Cumhuriyet Halk Partisi — CHP), in 1998 the class of large landowners with plots of 100 or more hectares constituted only 0.3 per cent of Mardin's population or roughly 2,500 families (Strohmeier and Yalçin-Heckmann 2010). An estimation given by one of my local interlocutors in the provincial agricultural administration speaks instead of around 5,000 large landlord families in Mardin out of which between 1,000 and 1,500 have their property on the Kızıltepe plain.

The second agrarian class are middle-sized farmers. This class refers to landowners with holdings of between 200 decare (20 hectares) and 1,000 decare (100 hectares). In 1991, this group constituted about 2.1 per cent — again only a small proportion of Mardin's agrarian society (figure 5). As indicated in figure 6, middle-sized landowners controlled around 33.7 per cent of the total land area in Mardin. This equals around 955.073 decare or roughly 95,000 hectares of arable land (figure 7).

Smallholders owning anywhere from less than one hectare up to 20 hectares of land constitute approximately 56.3 per cent and thus the majority of Mardin's rural population (Strohmeier and Yalcin-Heckmann 2010). Some 28.7 per cent of this group of smallholders even own less than one hectare. In 1991, smallholders held 76.4 per cent of all land parcels registered in the Mardin cadaster, but only 39 per cent (figure 6) of the total land area equalling 1,127,267 decare or roughly 112,000 hectares (figure 7). Finally, landless families constituted about 41.3 per cent of Mardin's population in 1991 (Strohmeier and Yalcin-Heckmann 2010). In light of a high probability of statistical error and the presence of unregistered migrant labourers from Syria or other regions, this estimation will likely have to be corrected upwards.

The numbers discussed, indicate that Mardin in general is characterised by a high concentration of land in the hands of a small minority of landowning families. All of this has implications for the balance of power in the rural areas. Although, large landowners (between 0.3 and 0.8 per cent of the population) control relatively small estates when compared to large landowners in other parts of the world, they nevertheless have a massive relative advantage vis-a-vis the rest of the landowning classes in Turkey.

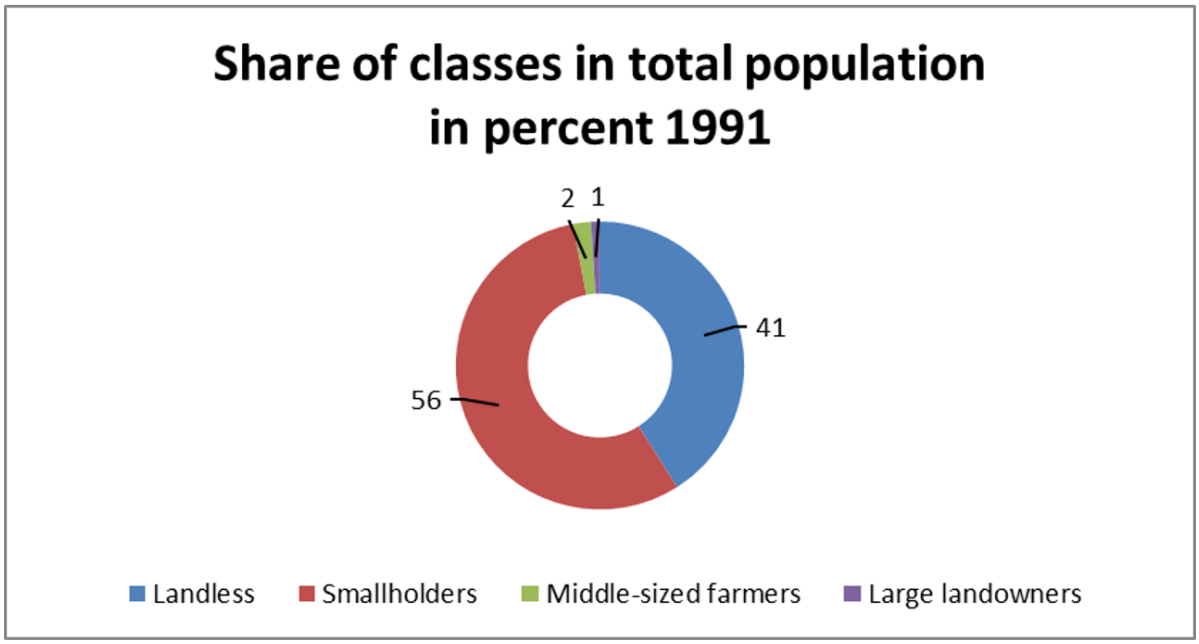

Figure 5: Share of classes in total population in per cent 1991[32]

[32] Data derived from Turkstat — Agricultural Statistics Database; http://www.Turkstat.gov.tr/VeriBilgi.do?alt_id=1006.

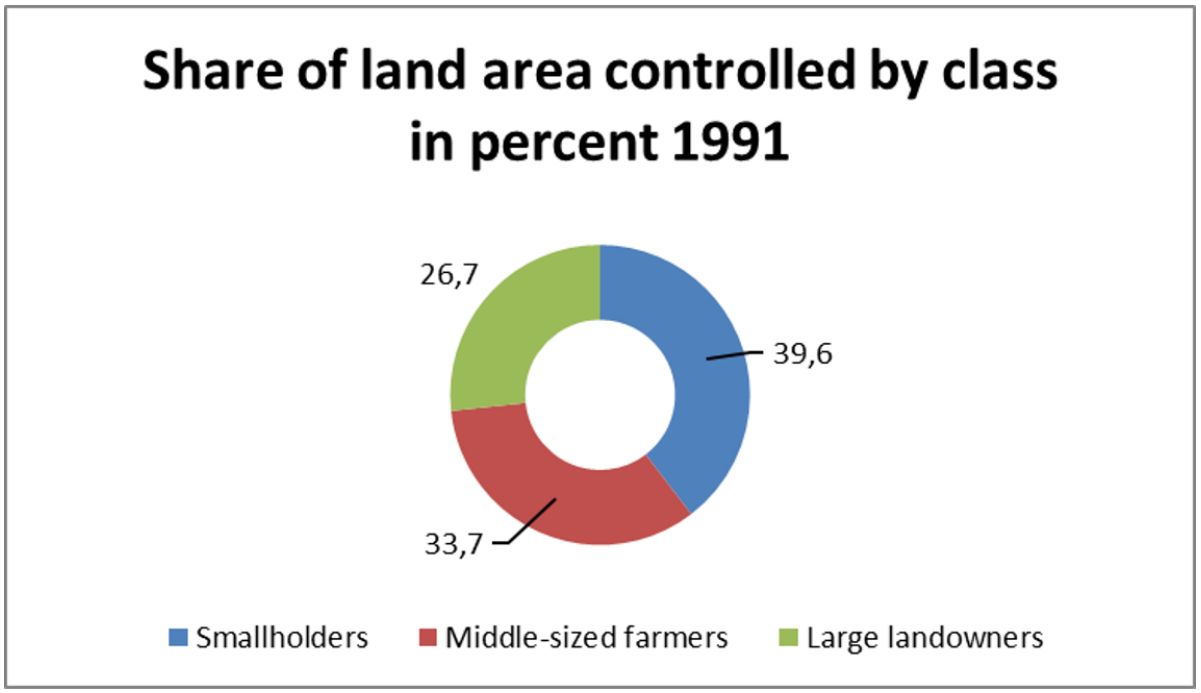

Figure 6: Share of land area controlled by class in per cent 1991[33]

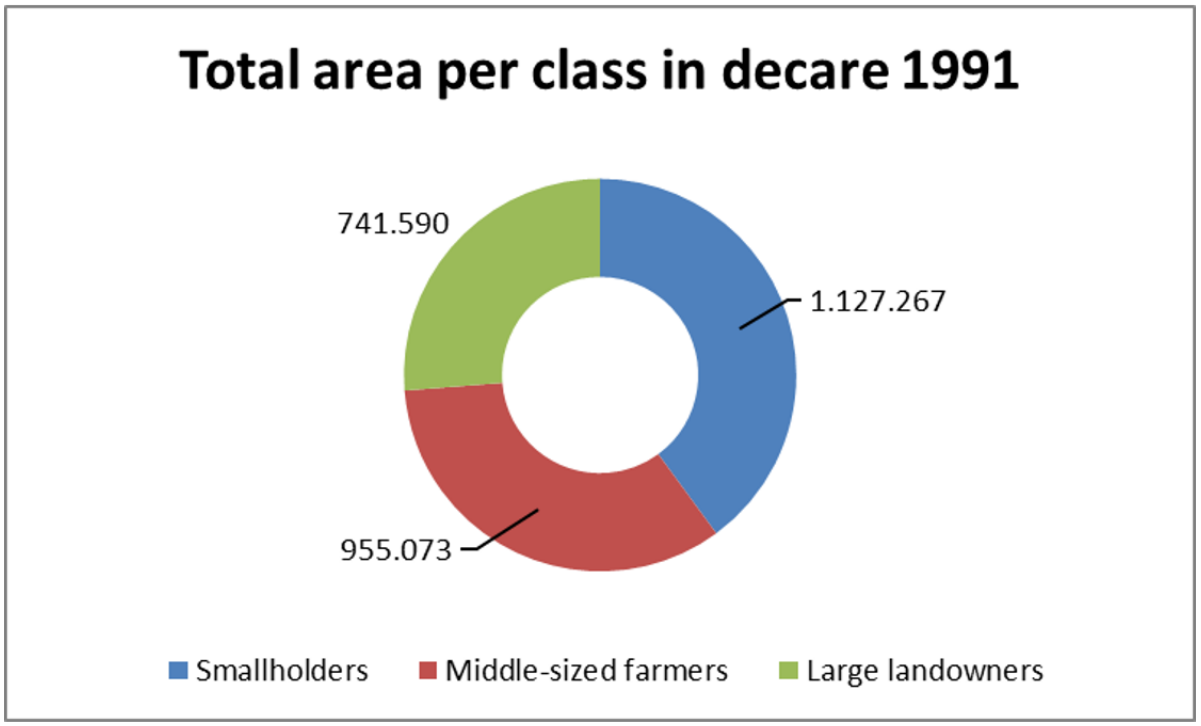

Figure 7: Total area per class in decare 1991[34]

[33] Data derived from Turkstat — Agricultural Statistics Database; http://www.turkstat.gov.tr/VeriBilgi.do?alt_id=1006.

[34] Data derived from Turkstat — Agricultural Statistics Database; http://www.turkstat.gov.tr/VeriBilgi.do?alt_id=1006.

Important to note is that officially available statistics on Mardin's rural classes and their assets are often severely flawed. For instance, according to a local source, the latest official total number of landed farmers indicated some 30,000 registered landowners; but the actual number of individual landowners was allegedly (and more likely) somewhere around 100,000. One of the reasons for this statistical discrepancy is that farmers in the region tend to avoid the disclosure of relevant information. The inaccuracy of those statistics notwithstanding, the numbers presented in figures 6 and 7 nevertheless underscore the unequal distribution of land and other assets which, taken together, represent the material basis of agricultural practice in the region.

The 1991 data on land holdings and land concentration translate into a strikingly high Gini-coefficient of 0.79, making Mardin the province with the highest concentration of land among all Turkish provinces. In fact, apart from Mardin, only Diyarbakır had a Gini- coefficient above 0.7. Mardin's neighbouring province Şanlıurfa, a province notorious for severe inequalities in rural material relations, had a Gini-coefficient of 0.59. For further comparison, Turkey's major grain-producing region, Konya, and the centre of cotton production, Adana (with which Mardin and Şanlıurfa as emerging cotton and grain producers currently compete), had land concentration rates of 0.6.

The high degree of inequality in landownership in Kızıltepe has historical roots. According to acclaimed Turkish sociologist Cağlar Keyder (1989), family-owned villages and the associated control of agricultural land are the direct result of a phase of enclosure and land grabs by large landlords and tribal chiefs, which occurred during the state's unsuccessful attempt to distribute public land to the landless and smallholder classes in the 1950s.[35] However, the 1950s reforms were by no means the first incidence of land enclosure in the region. Martin van Bruinessen (1992) describes how a century earlier the 1858 Land Code[36] initiated very similar responses to those described by Keyder.

7.2.5 Agrarian institutions governing production, land and labour

I now turn to a description of agrarian institutions and governance structures which are integral to the organisation of social relations of production and reproduction on the Kızıltepe plain. The following description owes greatly to Ahmet Özer's (1998) study on labour relations in

[35] It is noteworthy that, for family-owned villages which existed before this process the 1950s land reforms constituted a much welcomed opportunity to obtain formal recognition of what had been up until then informal property and ownership rights.

[36] The Land Code of 1858 was initially intended to reduce widespread abuse of public lands. However, when it was implemented, it set the stage for massive enclosure of what had been common village land, transforming use rights into private ownership. A general concentration of land titles among Aghas, sectarian leaders like Shaiks and other powerful actors from Kurdish society resulted (van Bruinessen 1992).

the rural areas of South-east Anatolia. Based on Özer's observations one can distinguish between at least four general institutional arrangements under which landownership, tenure and labour relations in the region are organised: tenancy, sharecropping, labour and tillage/harvest. In practice each of these institutional arrangements can occur in a variety of forms adapted to Kızıltepe's contextual conditions. Furthermore, each arrangement vis-à-vis the interrelated coordination problems of ownership, tenure and labour has distinct implications for what Scott (1976) refers to as "the balance of exchange" between rural classes. The discussion that follows describes these arrangements with special reference to the situation I encountered on the Kızıltepe plain.

Land tenure. Tenure arrangements, locally known as *Icarcılık*, are struck, first, between competitive middle-sized farmers and absentee landlords and, second, between middle-sized farmers and smallholders. In both cases, it is usually the middle-sized farmer who acts as tenant, while the absentee landlord and the smallholder rent out the plots they own. Large well-endowed landowners are, to my knowledge, seldom active as tenants, with the exception of intra-family tenancy. Kızıltepe's smallholders on the other hand are usually too poor to rent additional land for themselves, so they may opt to rent their smaller holdings out to others.

In tenure arrangements, the landowner who rents out his plot receives a fixed sum for its occupancy irrespective of annual yield and commodity prices. Tenure arrangements imply that the producing tenant, the *Ortakçı*, assumes all risks but that he also retains all surplus returns. What differentiates tenure arrangements in Kızıltepe from those typically found in other parts of the world is that tenure contracts in Kızıltepe are seldom established over periods longer than one or two consecutive seasons.

Middle-sized farmers may lease additional plots whenever land is available and whenever it is economically feasible for them to do so. However, most would prefer to purchase additional land rather than to enter into short-term tenancy contracts. The decision to rent land is made from season to season based on the farmer's, qua prospective tenant's, access to surplus capital, his ability to withdraw labour from his own plot, the terms of tenancy and the commodity prices at the time. Another criterion for renting additional plots of land is their proximity to the prospective tenant's own land. Whenever possible, tenants will choose to rent plots that are directly adjacent to their own.

Tenancy agreements in Kızıltepe exist as formally fixed contracts and as informal arrangements. The relatively few long-term leases that I was aware of, were often (but not as a matter of principle) formally secured. Short-term leases of only one or two years, on the other hand, were usually based on informal arrangements. The rules that define contractual relationships, individual responsibilities and associated property rights in such informal arrangements are nevertheless clearly defined and binding for all parties involved (so I had

been informed). In the case of rule violations or disagreement, the conflicting parties would typically call on the families involved or the village community as a whole to engage in mediation.

In hindsight, Icarcılık contracts appear an important and flexible way for middle-sized farmers to be able to increase their agricultural output but who cannot afford to purchase additional plots of land to this end. Nevertheless, these seasonal tenure arrangements are precarious as the tenant must speculate on future returns despite the risks of potential crop failure and price volatility.

Renting out land is a way that petty landowners — including absentee owners who may have moved to other parts of Turkey or even other countries — can maintain ownership despite growing pressure on smallholders. Informal, seasonal land leasing thus counteracts landownership concentration while it gets people off the land and away from the countryside, making them available to the labour force in other economic sectors. At the same time, such arrangements preserve smallholders' access to their original land. For those who may have emigrated from the region due to the Kurdish conflict or chronic poverty, such tenancy arrangements also represent a possibility for them to remain attached to their respective home villages.

Sharecropping. The second type of institutional arrangement under which Kızıltepe's agriculture is organised is the genuine sharecropping arrangement called *Ortakçılık*. It occurs in one of two forms: a *Marabacılık* contract or a *Yarıcılık* contract. A Marabacılık arrangement is one in which a smallholder peasant or a landless family provides the entire means of production, labour in particular, while working on a landlord's land in a sharecropping scheme. In Marabacılık arrangements, compensation to the landowner is typically one-tenth to one-fourth of the harvest. In a Yarıcılık arrangement, a labourer's family provides only some material inputs and some phases of the work. Yarıcılık contracts are often used as a means of resource pooling or cooperation between two smallholder families or between a smallholder and a middle-sized farmer.

Like tenancy agreements sharecropping agreements are almost exclusively governed by informal institutional arrangements rather than formally secured contracts. The recourse to informal agreements and rules allows, as in the case of tenancy agreements, a high degree of flexibility on the part of the contracting partners. In addition, the contractual partners in informal sharecropping arrangements avoid high costs, bureaucratic hurdles and the obligation to verify an employer–employee relationship for taxation and other legal purposes. Again, as in informal tenancy arrangements, the informal rules for sharecropping serve to clearly define the transacting partners' responsibilities and property rights. The resolution of conflicts over the terms of the arrangement, however, remains mostly with just the contracting partners

themselves because the sharecropper tends to have a lower social standing and, associated to this, less representation in the village community than the landowner for whom the he has agreed to work. But, as will be explained in greater detail below, the ability to avoid third-part mediation is one possible source for abuse of power by the landlords.

Wage labour and bonded labour. The third type of agrarian institutional organisation, the *Civelek* arrangements, constitute land and labour relations between landowners and the landless class. Civelek relations are exclusively based on informal contracting, a setting which has similar flexibility to and cost-effectiveness of local tenancy and sharecropping agreements, but which also leaves similar room for abuse by the comparatively more powerful contractual party, the landowner. Civelek arrangements typically occur as a scheme known as *Rıpçılık* in which a landless family works a large or a middle-sized landlords' land and in which all costs and inputs as well as the housing are born by the landlord. Rıpçılık arrangements are often established for periods of many years and sometimes over generations. A second type of Rıpçılık arrangement is the *Azap* which refers to day-labour or seasonal labour. Azap implies that the landless labourers are employed for only a season and that they are paid in naturals or provided with a small plot of land which they can work for their own profit or subsistence.

The Civelek arrangements are the most blatantly obvious example of the much criticised "semi-feudal" character of land and labour relations in Kızıltepe. Landless labourers in Civelek arrangements enter into a system of dependency from their landed employers. The landless labourers have the lowest social standing in the village. This is directly reflected in the label Azap which in general usage refers to a state of "sufferance". Civelek arrangements come into play whenever there is demand for manual labour. The employment of landless labourers occurs either on a daily (*gündelik*) or seasonal (*mevsimlik*) basis. The demand for manual labour depends to a large extent on the availability of technology.

Tillage and harvest arrangements. The fourth type of exclusively informal agrarian institutional arrangement and governance structure, *traktör müteahhitliği*, is based on opportunities that have emerged from a historically low level of mechanisation and unequal control over productive forces, for example, tractor ownership. In traktör müteahhitliği arrangements, a tractor owner works the plot of a landowner who himself does not possess the necessary machinery. As compensation for his services/input, the tractor owner receives a share of the harvest. This arrangement differs from sharecropping and Civelek arrangements, because it rests on more equal bargaining power between transacting or contracting parties. Traktör müteahhitliği arrangements occur generally only between landowners with the same, or at least very similar social background and standing in the community.

The importance of such arrangements will become clear if one considers the historically low level of mechanisation of South-eastern Anatolia's agricultural sector. According to a study by the Orta Doğu Teknik Universitesi (ODTÜ) in 1993, only 25 per cent of farmers in the region owned a tractor (ODTÜ 1993). A variation of this type of technology-based sharecropping, which has evolved alongside groundwater irrigation on the Kızıltepe plain, is based on access to water and its associated technology, mainly wells and pumps. Well owners get a share of the crop for irrigating neighbouring fields. Due to the stationary set-up of irrigation technology, water sharing only occurs among neighbours with adjacent plots.

7.2.6 Production relations

Landowners on the Kızıltepe plain regularly enter into such institutional arrangements as those described above (and their subvariations), applying great flexibility depending on the economic situation of each transacting partner at a given time. The agrarian arrangements governing the interrelated coordination problems between ownership, tenure and labour are almost never based on any sort of formal contracting; to the contrary, almost all such arrangements are based on oral commitments and handshakes, which result in comparatively low transaction costs. In South-east Anatolia, informal agreements are the rule for agrarian transactions, ranging from the seasonal leasing of land among neighbours and from absentee landlords to the purchasing of inputs such as fertilisers or pesticides and leasing machinery from local dealers, to the sale of the harvest to middlemen at the local grain market, to obtaining skilled and unskilled farm labour. For all of these different kinds of transactions, one observes hardly any instance of formal contracting.

The largely informal character of land- and labour-related contracting and the comparatively brief contractual periods make it almost impossible to give accurate figures for the amount of land being cultivated or otherwise under operation for each of the different systems. The great flexibility as regards institutional solutions, informal contracting and low transaction costs are all to the effect that Kızıltepe's farmers enjoy a high degree of adaptive capacity. The preference for informal especially oral agreements can be explained by a number of contextual factors. It also has many implications for those actors directly involved and for third-party actors less directly involved, like the state. Informal agreements generate lower transaction costs; this is particularly important because the remoteness of Mardin's rural areas and the political instability there tend to drive up transaction costs in South-east Anatolia. While spatial remoteness constantly decreases with improved roads and better transportation as well as better access to communication technologies, political instability nevertheless remains high. Political instability in Mardin (and in other south-eastern provinces) means that the market for many services is comparatively small and that access to these services, for instance agricultural credit, is often tied to excessive surcharges for substantial risk and unsavoury

practices like usury. Farmers in Kızıltepe try to avoid all of this by resorting to informal markets and solutions.

By avoiding formal contracting, farmers and their transaction partners can also avoid any form of taxation for incomes, sales, administrative service fees, social security payments or other forms of state revenue generation. Informal contracting further allows farmers to circumvent formal labour legislation – most notably, the requirement for a labour permit and the ban on child labour. Getting around child labour laws, for example, allows farmers to draw on the labour reserve of underaged, unmarried women. Avoiding formal labour permits – an important factor for securing cheap and plentiful farm labour – lets farmers draw on the pool of stateless seasonal migrant workers crossing over from Syria and, more recently, of Syrian war refugees. Neither of these groups would, under Turkish law, qualify legally as labourers for Kızıltepe's agrarian sector. Whereas informal contracting sometimes crosses the line into illegality and corruption, it is also a strategy in itself for farmers to avoid the negative impacts of third-party corruption, for instance, from local bureaucrats.

For impoverished families or those without work permits, unskilled farm labour represents one of the only sources of income in the region. This situation, in turn, means that agricultural producers, have access to a cheap and abundant labour force composed of actors with particularly weak bargaining power. Thus, unskilled undocumented landless labourers are often forced to accept comparatively unfavourable terms of trade because of the stark imbalance in negotiation strength between themselves and the landlords. Further, the fact that labour contracts are predominantly informal also means that labourers have no access to third-party enforcement of fairer terms of trade, or to any kind of social security or insurance for illness or injury.

The imbalance in negotiation power between landlord and landless labourer is further aggravated by gender inequality and labour-related economic and social desperation. Except for times of acute labour shortages, landless labourers are in a "take it or leave it" situation which is further aggravated by insufficient or disputed information about key determinants for the value of their labour, such as up-to-date median wages, commodity prices and harvest rates. During cotton harvests, for example, the weighing and recording of the manual pickers' daily or hourly harvest is just one of many transactions between employer and employee that invites fraud and distrust on both sides.[37] In the context of payment in sharecropping arrangements, there is often a considerable lack of clarity as to the total amounts harvested and thus the share that is to be given to the landless labourer family. But even when amounts harvested are undisputable and payment of the share is in cash, the price of the marketed

[37] James C. Scott discusses many different forms how labourers and contractors try to cope with/make the best of this situation based on often very creative deceptive moves Scott (1990) and Scott (2009).

commodities may become controversial. In such situations, a landowner may claim that he earned only little or that the costs were particularly high; a worker who demanding remuneration, on the other hand, may claim that the harvest was bountiful and the prices particularly good.

7.3 Summary

In this chapter a number of cultural, social and political peculiarities of South-east Anatolia were discussed. The context described here represents the historically grown "terrain" that the mechanisms of state intervention described in chapter 6 encounter and ultimately seek to change. Fertile land is a main feature of the plain's agroecology, but it is also characterised by severe seasonal water shortages which, in the absence of irrigation, impose long fallow periods during the hot and dry summer months. Life in the rural areas and in the villages was described as comparatively simple and largely devoid of the comforts which people in Turkey's western regions are usually used to.

Kızıltepe's rural class structure, the composition of its village communities and the prevalent patterns of ownership and control were described as peculiar and unique in several ways. Some villages, including almost all of their physical properties, may be "owned" entirely by single landlord families or by aşirets. Other villages on the plain, in contrast, may be inhabited by small- and middle-sized family farmers with no tribal affiliation. Landownership in Kızıltepe was described as highly concentrated, a circumstance which is tantamount to the stark inequality among the people of the plain in as regards distribution and control of wealth and power. Transactions in agricultural production and tenure, as well as with regard to agrarian labour are organised, for the most part, informally. The widespread preference for such informal institutional arrangements can first and foremost be interpreted as a strategy for coping with the region's market deficiencies, as well as with high transaction costs and exceedingly high levels of risk. Nevertheless this preference is also an expression of — and, at the same time, the source of — a drastic imbalance in negotiation power between the landed classes and the landless labourers.

8 Manifestations of agrarian change in Kızıltepe

This chapter concludes my case study of the Kızıltepe plain. In what follows, I assess the structural changes that have emerged and continue to emerge as a consequence of more than a decade of state intervention. This chapter is organised around a description of observable trends and effects in terms of mechanisation, cropping patterns and crop productivity, land-use patterns, land markets, livestock production and labour relations. In addition, I will share a number of observations I made with regard to developments in the agribusiness sector and in a few other non-agrarian sectors which have also profited from the sudden growth in farming revenues. The description draws on my interview data, personal observations in the field and secondary data provided mostly by the Turkish Statistical Institute.

8.1 Going underground: Deep-well pumps and on-farm irrigation infrastructure

In the mid 1990's, before the various agricultural development programmes were introduced, heavy machinery was basically absent in Kızıltepe. By 2012, when the main part of my fieldwork was conducted, the situation could not have been more different. Heavy machinery like tractors and combine harvesters had become omnipresent in Kızıltepe; international agribusinesses, offering services and inputs upstream and downstream of agricultural production, were everywhere to be found in the province.

The single type of technology with arguably the greatest transformative effect on Kızıltepe's agricultural sector is the deep-well pump. In the period from 2000 to 2013, farmers in Kızıltepe acquired huge numbers of those pumps for irrigation. The sudden increase in installed pumps is all the more apparent when the figures from the pre-irrigation era in the early 1990s ae compared with those from 2013 (see table 9 below). In 1991 only 15 deep-well pumps were in operation on the plain. This number changed drastically within only two decades. By 2002 the number of deep-well pumps had increased from only 60 to 900, only to make another substantial leap in 2003 to 1,500. In 2013, farmers in the area had installed no less than 3,150 deep-well pumps.

Although these figures are impressive, it can be assumed nevertheless that the number of pumps actually installed was even higher. In fact, several of my interviewees reported that the number pumps in operation Kızıltepe actually ranged between 6,000 up to as many as 10,000 pumps. Irrespective of which figures are the most accurate, the sudden boom in acquisitions of deep-well pumps by Kızıltepe's farmers was clearly connected to the aforementioned public support programmes, especially the investment incentives offered in the context of the Rural Development Support Program. A farmer in a repair shop for irrigation equipment in the town of Kızıltepe stated the following:

"When they offered the grants and the cheap credits a few years back, everyone who had some money on hand went to get himself a pump" (Farmer interview 2).

Another dynamic worth mentioning is that the acquisition and installation of deep-well pumps created a sudden rise in demand for various other irrigation-related technologies, including pipes for water transport and drainage, sprinkler systems and, although to a smaller degree, the more costly drip-irrigation systems. In 2012 some 2,150 sprinkler systems were officially set up to irrigate the plain. And, in keeping with the steady increase in pumps, by 2015 the number of sprinkler systems had increased to 2,350.[38]

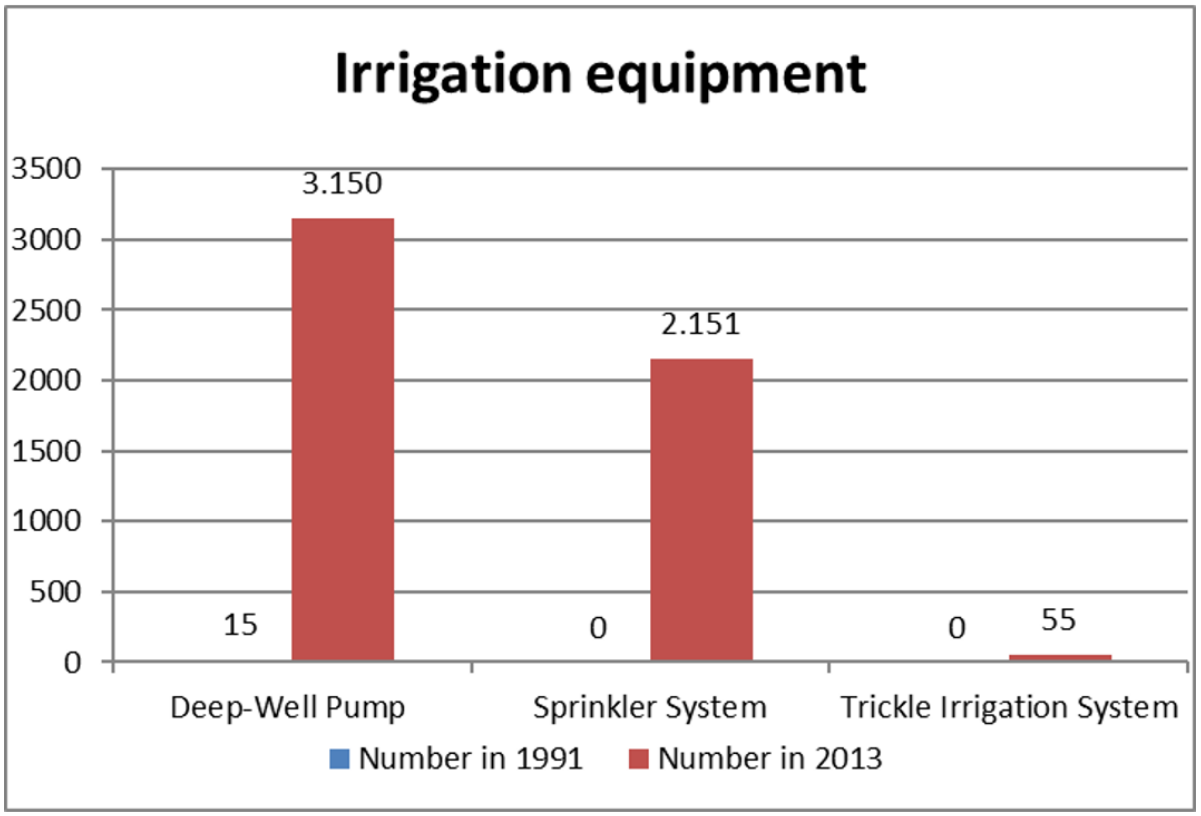

Figure 8: Uptake of irrigation technology on the Kızıltepe plain 1991 compared to 2013[39]

The effects resulting from the introduction of irrigation pumps were far-reaching. A farmer who had installed one was suddenly able to irrigate his (and sometimes even his neighbours') fields year-round without having to worry about water scarcity. In the eyes of the farmers with whom I spoke about the effects of the introduction of irrigation, it meant a fundamental change

[38] The official figures given here are to be understood as mere estimates. In view of the much higher number of pumps reported by my local interlocutors, a much higher number of sprinkler systems and other irrigation-related technologies can also be assumed to have been introduced on the plain.

[39] Data derived from Turkstat — Agricultural Statistics Database, http://www.turkstat.gov.tr/VeriBilgi.do?alt_id=1006.

to their economic circumstances and the chance for a significant improvement in their levels of income. One of my interlocutors argued thus:

> *"If all goes well, then each pump feeds an entire family" (Group interview 1).*

According to the above figures, irrigation therefore meant an economic livelihood for between 3,500 and 10,000 families. The diverse economic effects of the introduction of irrigation will be further discussed below.

8.2 To learn or to perish: Novel transactions, novel action situations

The introduction of irrigation was synonymous with the emergence of countless new activities and challenges. Such new activities and challenges occurred at the time of the purchase and installation of irrigation equipment, as well as during its operation and over the entire subsequent period of production. A farmer in the village Yayıklı described the situation as follows:

> *"In the beginning, nobody knew how to do it right. We had to learn everything and some of my neighbours went all the way to Adana to find out about … irrigation. Today, of course, everyone knows how to do it, but back then everything was new and some people even accidentally destroyed their pumps because they did not know how to use them properly" (Farmer interview 2).*

A remarkable institutional innovation that I was told about in this context was that farmers who had excess irrigation capacity were paid to supply water to their neighbours' land. This is basically a modification of the already established practice of tractor lending. In addition, many new and different types of business contacts developed. Whereas one used to go to the input trader "once or twice a year", one must today "constantly keep up with them". Farmers emphasised how important it was to have good contacts with seed company representatives of the; some spoke, for example, of regular interactions with spare-parts dealers and repair-services suppliers. One farmer noted as well that

> *"Today you are also constantly at the bank [to] negotiate loans or to do other financial dealings" (Farmer interview 4).*

Another farmer described new actor constellations were also described at the farm level thus:

> *"Today a high demand exists for well-trained workers who are familiar with the operation of irrigation systems and agricultural machinery" (Farmer interview 5).*

And finally, a farmer who specialised in the cultivation of fruit and pistachios described the situation this way:

> *"Each of us landowners looks for these co-workers. These people get a lot of money and they can choose where they want to work. Many of them do not come from here at all, but from the Çukurova or from the west. Often, only one of these men is enough to run the whole business. It's worth it for both sides" (Farmer interview 3).*

This last interviewee also pointed out that far fewer people were employed on the farm today than had been in the past.

8.3 Free of charge: Electricity for irrigation

One aspect that should be mentioned in connection with novel transactions and new situations is the role and organisation of energy supply for irrigation. The deep-well pumps in Kızıltepe were run with electricity from the public grid. Most of the pumps were supported by diesel generators as backup in case of electricity shortages or interruptions to supply. While every private user was officially obliged to pay for the electricity, I was told repeatedly that, in actual practice, not a single farmer was compelled to do so. Some farmers were registered users, but had never received an invoice for the electricity they consumed; others had been given permanent access to the grid, but were never registered as users; and still other farmers were billed, but irregularly, and they simply never bothered to pay the invoices.

The farmers frequently emphasised that the free use of electricity and investment incentives were decisive for the profitability of irrigated agriculture. If farmers would have to pay for the electricity, many argued, then irrigation would no longer be profitable. Interestingly, in another separate interview, an employee of the local GAP administration argued similarly: The farmers, I was told, needed every kind of financial support possible, in order to improve their situation; and the state, in its struggle to develop the region, did well to deliberately overlook the unlawful consumption of electricity. At the same time, however, this same interlocutor pointed out that unlimited access to electricity also resulted in overuse or a waste of electric energy and water. This was reflected, among other things, in the progressive drop in water table and in soil salinization on the Kızıltepe plain. Another, more critical voice argued that free access to electricity meant that farmers remained economically dependent on, and constantly expected something from, the authorities.

At the time of my field research, the failure to enforce electricity payment was an open secret in Mardin. For example, an employee of the public electricity provider spoke about this practice after just a few minutes of conversation. The electricity supplier, he said, did not have sufficient personnel to cope with the task of trying to collect user fees. The power plants and

distribution stations, he argued, were busy just trying to keep electricity production and distribution up and running without major interruptions. In fact, power cuts and shortages are part of the daily routine in Kızıltepe. This unsatisfactory situation even prompted a group of farmers from Kızıltepe to set up roadblocks on Ipek Yolu on 28 August 2014, in protest. They demanded compensation from the state for crop failures that were due to interruptions in irrigation (Haber Turk, 28 August 2014).

8.4 From manpower to horsepower: Changes in use of heavy machinery

Simultaneously to the installation of thousands of deep-well pumps and sprinkler systems, Kızıltepe's farmers had also made unprecedented investments in tractors, combine harvesters and other types of heavy machinery (figure 9). In 1991 there was not a single combine harvester registered in all of Mardin, but by 2013 Kızıltepe farmers alone had acquired 110 combine harvesters and 27 fully automated cotton pickers. In the same period in Kızıltepe, the number of four-wheel tractors with more than 50 hp rose from 725 to 767. The farmers with whom I spoke about the purchase of these machines, told me their decision to do so was based solely on the provision of state subsidies; based upon their own means and without state support such a purchase would have been impossible.

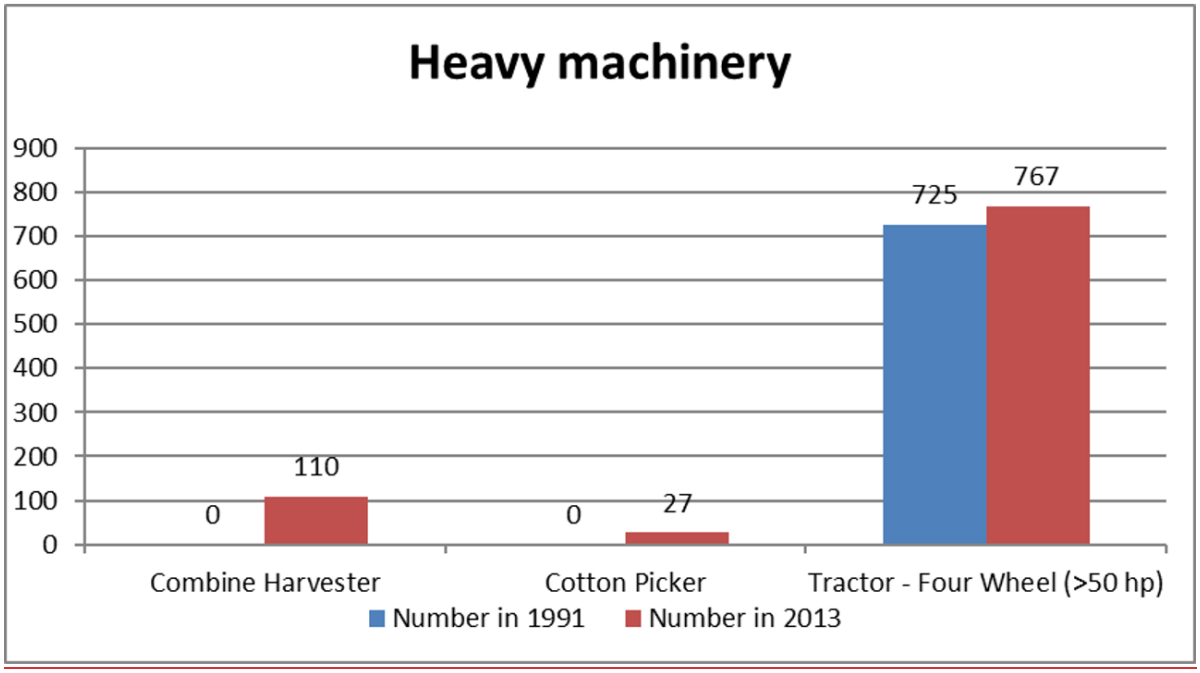

Figure 9: Heavy machinery in Kızıltepe 1991 compared to 2013[40]

[40] Statistics derived from Turkstat — Agricultural Statistics Database; Turkish Statistical Institute accessed online 27.06.2016 http://www.turkstat.gov.tr/ VeriBilgi.do?alt_id=1006.

Considering the overall number of landowners on the plain, the above figures may appear small. However, it is important to note that the newly acquired tractors were far more powerful and advanced than the ones that had been in use in the 1990s and before. A group of farmers with whom I talked about their decisions and their experiences in buying new tractors, told me that many of their colleagues had exchanged their old machines for new ones in recent years. While the increase in the total number of tractors was therefore relatively small, it can be inferred from the interviews that since the beginning of the 2000s large parts of the fleet in Kızıltepe had been replaced by modern high-performance machines.

The extent of mechanisation and its role in changing land-use and production patterns in Kızıltepe, is shown less by the comparative numbers of machines such as tractors, than it is revealed by the diversity of the new, highly specialised machinery in use by 2013. A respective statistic provided by Turkstat is extensive; it includes cultivators, land rollers, disc harrows, toothed harrows, hay rakes, fertiliser broadcasters, balers, hay silage machines, silage maize harvesters, cotton pickers, stalk cutters, engine driven pumps, sprinkler systems, milking machines, water tanks, sub-soilers, stone pickers, hole diggers, stubble drills, straw machines and feed spreading trailers.[41] What is striking is that none of these specialised machines had been introduced or was in use prior to the introduction of deep-well pumps starting in 2002. The diversity of the machines described is also an indication of the increase in new and complex transactions in the production process described above.

8.4.1 Mechanisation and labour demand

Tractors, combine harvesters and cotton pickers are means to increase the precision and standardisation of agricultural production. More importantly, however, these machines represent the quintessential models of labour-saving technologies in agriculture. A single, modern-type combine harvester or cotton picker will do the daily work of tens or even hundreds of agricultural labourers in only a few hours. Similar degrees of manual labour are obviously saved with modern tractors which can be used at almost any stage in the production process. While the deep-well pumps operating on the Kızıltepe plain created access to a much increased natural resource base for agricultural production, the tractors, combine harvesters and other machinery represented primarily the effort to increase agricultural output but to economise on the inputs and labour required to exploit this newly accessible natural resource base.

[41] Turkstat — Agricultural Statistics Database (2016), http://www.turkstat.gov.tr/VeriBilgi.do? alt_id=1006.

Time and again, the farmers with whom I spoke about the purchase of heavy machinery emphasised that access to modern machinery was an unprecedented relief and boon to their work.

> *"In the past we had to do everything by hand or with the help of completely outdated tractors. Some of these were still from the 1950s. All the work we have today couldn't be done that way" (Group interview 1).*

A further advantage of the machines, so I was informed, was that, compared to earlier times, it was possible today to work much more efficiently and accurately. Finally, a number of machine owners pointed out that their tractors and harvesters had made them less dependent on the availability of farmworkers. Much of the work that used to require a lot of people could now be done alone or with the help of just one or two skilled workers.

The effects of farm mechanisation on the demand for manual labour were not restricted to land–labour relations between a machine-owning farmer and his workers. One farmer I spoke with in the village Ataköy stressed that, during several stages of the production cycle, modern machinery in fact exceeds its owner's demand for labour; middle-sized farmers sometimes needed their machinery only for brief periods and therefore welcomed the opportunity to rent farm machines out to their neighbours. Indeed, by 2012, a thriving informal market for the earlier mentioned traktör müteahhitliği had emerged. The introduction of other specialised machines in addition to tractors and harvesters, expanded and further institutionalised the practice of renting out machinery to a neighbour for a fee or, alternatively, working his land for a share of his crop, throughout the growing season or during harvest.

Owning machines or being able to borrow them meant clear relief for farmers in the sense of reduced transaction costs. When a farmer depended on manual labour, he had to spend considerable time and effort negotiating the terms of trade with his labourers, even when these negotiations occurred on unequal terms. As one of my interviewees pointed out

> *"The workers constantly fought with me about their wages and working hours and tried to renegotiate. Since we don't do contracts here, the workers often would claim that we had agreed to different terms or that they needed higher wages because the prices for bread and tea had suddenly risen or because of some other story. At other times, they would not show up at all, because somebody else had offered them more. Now, with my harvester, there is no need to bother with these people anymore" (Farmer interview 6).*

8.4.2 Mechanisation and labour supply

Although the introduction of machines created new possibilities for many landowners or organise agricultural production more efficiently and more cost-effectively, for agricultural workers in Kızıltepe this development meant a significant deterioration in labour-market conditions. It should be emphasised that the demand for manual labour not only slumped among farm machinery owners, but also among farmers who participated in lending arrangements, so that the demand for manual labour shrunk accordingly.

When I met with a group of landless fieldhands in the village of Dikmen a few kilometres west of the town of Kızıltepe, they told me that, despite an apparent boom in agriculture, for people like them there was less and less work to be found. With the introduction of modern agricultural machinery, many of the traditional tasks in the field such as planting, care or harvesting, which had previously required manual labour, had ceased altogether, or workers were paid only starvation wages for doing them. As a consequence, many agricultural workers were now forced to seek work in construction or other sectors outside agriculture.

The loss of work as a result of mechanisation affected not only seasonal agricultural workers from other regions or from Syria, but also people who were firmly rooted in the village communities. A case in point is given by a group of farmworkers who had lived with their families for several decades on the estate of a large landowner near the village Köprübaşı: almost overnight all of them had lost their livelihoods and their homes. Since the right to reside in the simple village huts provided by the landowner was part of their remuneration for labouring in his farm, in the wake of mechanisation, these workers were also forced out of the village and what had been their homes, and compelled to look for new abodes and to seek employment elsewhere.

When asked about the differences between labouring in farm and construction work, farmworkers told me repeatedly that, although work in the countryside was similarly exhausting, it was far less dangerous than work in construction. My interlocutors added that, in the past, they had often been able to work for one and the same landowner on a long-term basis. The landowner would have personally known his workers, and in some cases even their children. As long as one did his work, the employer ensured that the workers were well-off. In contrast to farmwork, work in construction was completely anonymous and was done with ever-changing employers in a wide variety of places. Hired as day labourers without contracts, workers were constantly exposed to the risk of losing their jobs again after only a short time due to illness or accidents. And construction work offers no amenities like a guaranteed place to live and a small area to cultivate vegetables and fruit for one’s own needs, as was the case when workers were still employed by the landowners.

Workers also reported that they no longer had permanent or direct contact with one another as they had been accustomed to having in the past. Instead, the men were now having to commute to different places in the morning, leaving children and women behind and alone. Important to note, as I was so informed, is that to leave women and especially girls of marriageable age without protection and not under a watchful eye, is commonly considered disgraceful.

One of the landowners in the village of Yayıklı spoke about his relationship with his workers. He said that, in earlier times, when most of his land was still cultivated manually, he always felt and had a great responsibility toward his workers:

> *"I was like a father to them. I gave them a roof over their heads; I gave them work and food. If there was an argument, I had to mediate and judge. If there was a wedding or a funeral, I gave them all free. If a child became ill or a worker was injured, I paid the doctor and the hospital. Even when my harvest was barely enough to survive, I always paid them enough to live" (Large landowner interview 1).*

8.5 In Borlaug's footsteps: Changes in crop productivity and cropping intensity

Statistics on crop productivity and cropping intensity for the period from 1991 up to 2013 indicate drastic growth rates for single crop types and for the total annual output of Kızıltepe's agricultural sector as a whole. As discussed earlier, crop production up to the early 2000s (prior to the state's agricultural support programmes for on-farm deep-well irrigation) was restricted mainly to the rainy winter months. Water access year-round resulted in a boost to productivity for traditional crops like wheat and barley and allowed for the introduction of maize and cotton, two heavily subsidised cash crops the cultivation of which requires greater care and significantly greater amounts of water. Figures 10, 11, 12, and 13 (below) illustrate graphically the comparative levels/intensity of production for 1991 and 2013, for each of the four crops — wheat, barley, maize and cotton — respectively.

The substantial growth in productivity of wheat as well as that of cotton, maize and barley rests on the farmers' multifaceted attempts at agricultural intensification. Unlike the ways they had been farming in the period prior to 2000, after the millennium Kızıltepe's farmers began using sprinklers for irrigation throughout the growing season. Furthermore, they also started using hybrid, high-yielding seed varieties as well as better quality and larger quantities of chemical fertilisers and pesticides. And they had become more mechanised with the introduction of new agricultural machinery for tillage, planting, maintenance, harvest, post-harvest treatment and storage of crops. All of this was made possible by the Turkish state's agricultural support programmes.

The massive growth of agricultural production from the early 2000s up to 2013 can be also traced from official statistics. The production of durum wheat, traditionally the most important crop in Kızıltepe, nearly tripled from a total of 69,117 metric tons, or a yield of 165 kg per decare in 1991 to 194,608 metric tons, or 549 kg per decare in 2013. This growth in total production was achieved despite the fact that some 7,000 fewer hectares of arable land were cultivated for wheat production in 2013, compared to 1991. According to my estimations, subsidies designated directly for wheat production in Kızıltepe in 2013 ranged between 22.4 and 60 million USD.[42]

Barley, the second most important traditional crop in Turkey, experienced a similar growth rate; yields increased from 219 kg per decare in 1991 to 344 kg per decare in 2013. However, despite these obvious gains, by the time of my fieldwork in 2012 and 2013, barley had begun to lose some of its former importance vis–à-vis the newly introduced and highly subsidised cash crops, maize and cotton. Accordingly, fewer hectares — only around 4,000 — were devoted to barley production in 2013 compared to 30,000 in 1991.

With agricultural intensification on the Kızıltepe plain, maize quickly joined wheat in becoming one of the most important grains for production. By 2013, 392,174 metric tons of maize were harvested on nearly 40,000 hectares of arable land, surpassing even durum wheat production in the area. The maize produced in Kızıltepe is intended primarily for export, although some of it is retained for domestic consumption. Nevertheless, the shift to maize (which is also an important feed crop for livestock) was, in part, spurred by the establishment of an industrialised dairy sector on the Kızıltepe plain.

The second "newcomer" crop on the plain was cotton. Cotton can be considered as one of the most striking examples and the primary symbol of agrarian transformation in South-east Anatolia. Its importance is underlined by the fact that the cotton flower was chosen as the official logo of Harran University (established in 1992) which was envisioned as one of the centres of state-supported agronomic research in the region. Prior to groundwater irrigation, cotton production, a highly water-intensive endeavour, was non-existent in Kızıltepe.

[42] The large difference between the two numbers is explained by different assumptions regarding the percentage of grain purchased from Kızıltepe through TMO.

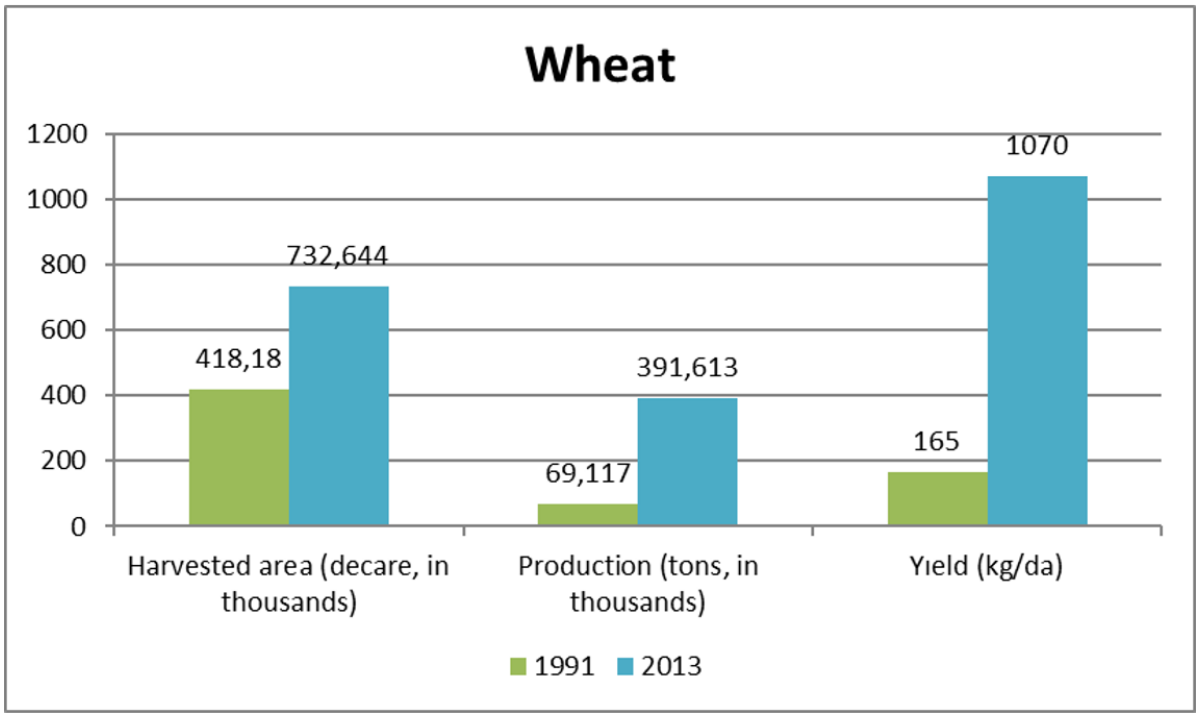

Figure 10: Wheat production statistics 1991 compared to 2013[43]

[43] Own drawing; data derived from Turkstat (2019); http://www.turkstat.gov.tr/VeriBilgi. do?alt_id=1006.

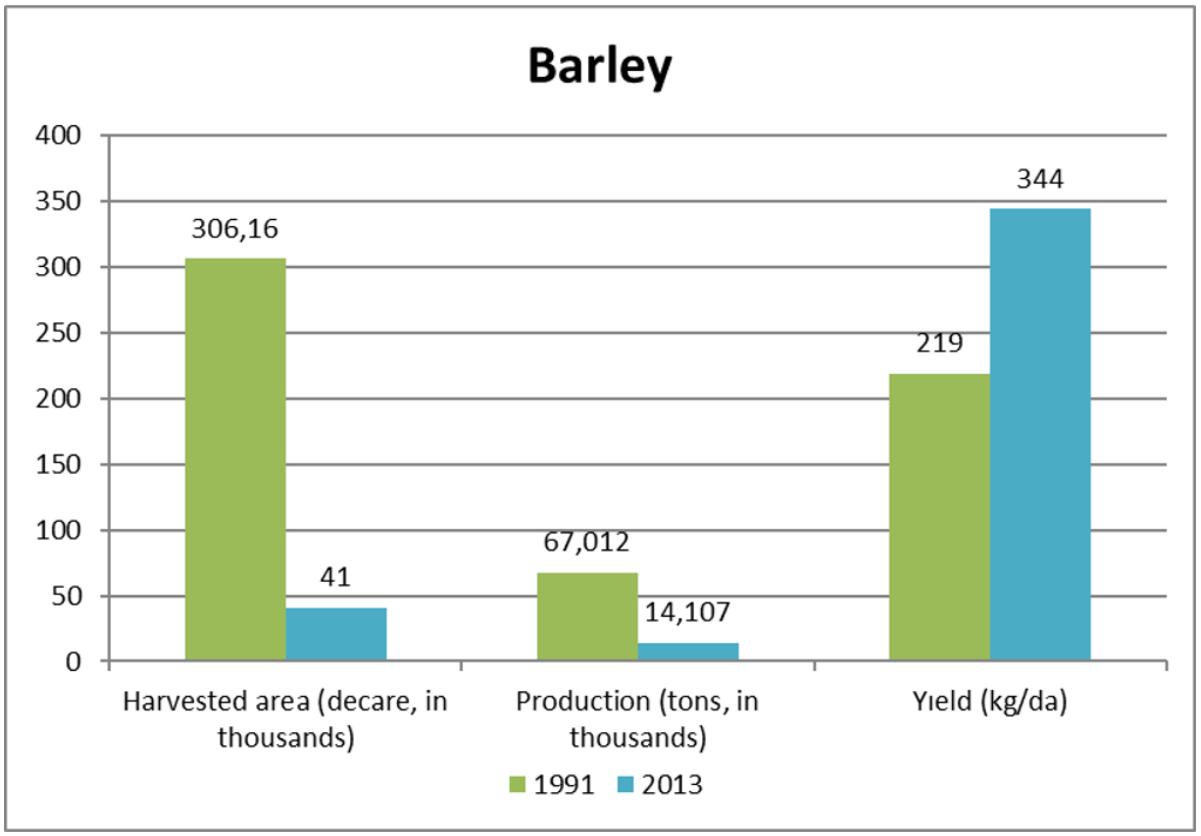

Figure 11: Barley production statistics 1991 compared to 2013[44]

[44] Own drawing; data derived from Turkstat (2019); http://www.turkstat.gov.tr/VeriBilgi.do? alt_id=1006.

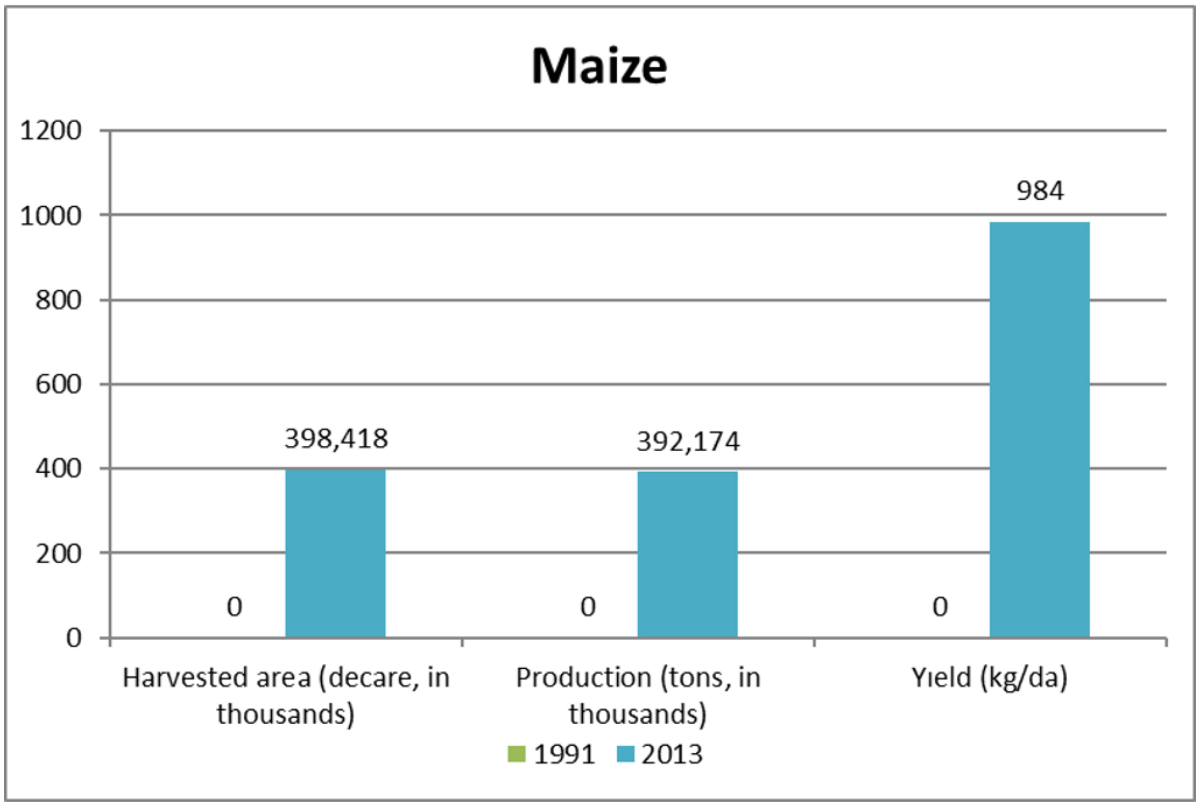

Figure 12: Maize production statistics 1991 compared to 2013[45]

[45] Own drawing; data derived from Turkstat (2019), http://www.turkstat.gov.tr/VeriBilgi.do? alt_id=1006.

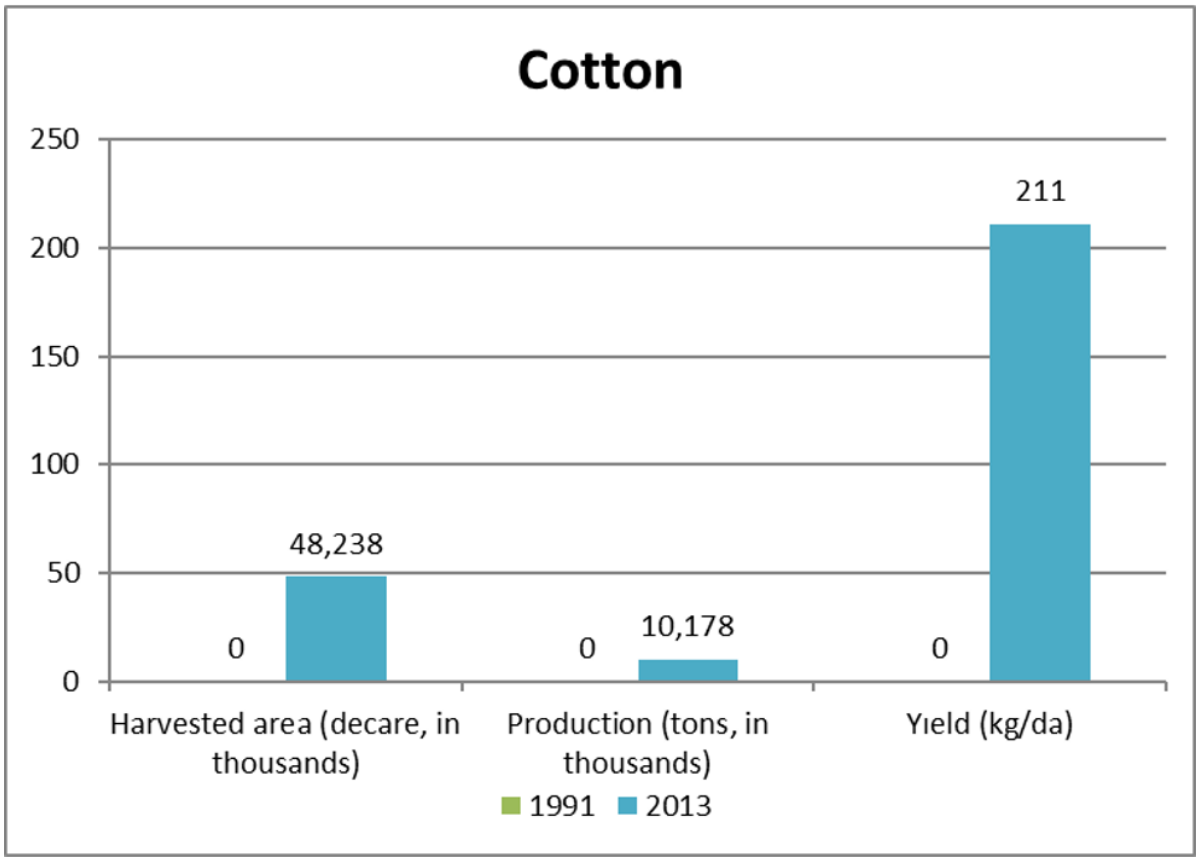

Figure 13: Cotton production statistics 1991 compared to 2013[46]

8.6 Betting on a good harvest: More revenue, more inputs, greater risk

With the extension of the production period over an entire year and with three to four times the harvest per hectare, Kızıltepe's farmers have achieved unprecedented increases in turnover. Official statistics on the annual value of crops produced in Mardin accordingly show a steep increase from around 85 million TL in 1998 to more than 1.4 billion TL in 2014 (Turkstat 2019).

A farmer from Dikmen described this situation as follows:

> *"At the time of harvest, when the maize has been brought in and sold on the grain market, we farmers carry around as much cash with us as we used to have in a whole year. The teahouses are full and everyone has a good time. Gifts are bought and debts are settled" (Farmer interview 1).*

The growth in agricultural production and revenues was also accompanied by an unprecedented increase in inputs. The farmers with whom I spoke with in Kızıltepe told me

[46] Own drawing; data derived from Turkstat — Agricultural Statistics Database (2019), http://www.turkstat.gov.tr/VeriBilgi.do?alt_id=1006.

that, with the advent of irrigation, they were forced to purchase more expensive seed and to use more fertilisers, pesticides and energy than ever before in the production process. These additional inputs were necessary, in part, due to the extended growing season — instead one or two crops per year, as in the past, farmers were now producing up to four or five. Another reason for the massive increase in inputs was modernisation of the production process which included the introduction of new crop varieties. In times of extensive agriculture, for example, field crops were frequently cultivated in Kızıltepe that required less mechanical care and significantly smaller amounts of fertiliser and other agrochemical inputs, compared to modern high-yield varieties. According to farmers I interviewed, traditional crops such as sorghum or lentils could be left on their own for long stretches of the growing period and they would still yield sufficient harvest by the end of the season. The high-yield varieties cultivated today require constant care, control and support in order to flourish.

According to my interview partners, the increased need for agricultural inputs also had tangible economic implications. Although irrigated crops had generated more profits for farmers since their introduction, agricultural production based on irrigation was also associated with higher costs and greater financial risks than in the past. In particular, middle-sized farmers regularly reported, that the "new agriculture" was a gamble. If you had a good harvest, you could

> *"buy what your heart desires. In such years the farmers would strut through their villages with gold watches and new suits. In the event of a bad harvest or if prices or subsidies were to collapse… one would be up to one's neck in debt and in the worst case would have to sell one's land and farm" (Group interview 2).*

"Taking a gamble," according to many of the farmers I talked to, meant that they bought their fertiliser, pesticides and other inputs from the trader on credit, with the promise to pay after the harvest. A seed and fertiliser trader in the town of Kızıltepe confirmed this practice and showed me a list of more than a hundred farmers to whom he had extended such credit. For small- and medium-sized traders, therefore, this practice meant that they also took considerable economic risk in order to sell their goods.

The economic opportunities and risks associated with intensive, irrigated agriculture were a constant topic of discussion among farmers. A number of interviewees told me about relatives or neighbours who had indeed gone bankrupt; the unfortunate farmers were said to have miscalculated investments or suffered crop failures and were thus unable to pay back loans or pay off credits. In some cases they were forced to sell their land to wealthier neighbours. I was never able to obtain exact figures about how many farmers had suffered such a fate since the beginning of irrigation, but a number of my interlocutors did tell me that there were at least few such cases in every village.

In an effort to reduce some of the risks associated with irrigated agriculture, many farmers applied as many inputs as possible to their fields in order to avoid crop failure and the inevitable economic difficulties that would ensue. One farmer with whom I spoke, near the village of Ülkerköy, described his decision simply as follows:

> *"If I can only pay the trader for three kilograms of nitrogen, then I will only use three kilograms. If I can pay for a hundred kilograms, then all of them will go on the field" (Farmer interview 2).*

Meanwhile, representatives from the local agricultural administration in the town of Mardin complained that Kızıltepe's farmers, in their efforts to achieve ever higher yields, were spreading fertiliser and pesticides far in excess of the actual need — something that would cause considerable ecological damage in the long run.

From the perspective of the agricultural business representatives, the dynamics described here represented growth potential that was risky but often worthwhile. The consequences of this growth were visible almost everywhere; at the time of my field research, I found a highly diversified and professionalised local market for various agribusiness goods and services. In the town of Kızıltepe, countless small- and medium-sized traders of seeds, pesticides, fertilisers and other agrochemicals had become established. There were also many shops selling tools and spare parts of all kinds. Along the main traffic artery, the Ipek Yolu, there were branches of the most important national and international suppliers of agricultural machinery. Also present were wholesalers for pumps, sprinkler and drip systems and other irrigation technologies. Present in the region as well were subsidiaries of major national banks such as the Ziraat Bankası, and a wide range of consultants or agencies providing agricultural extension services.

8.7 Land is money: Changes in land prices and land use

During my field research, remarkable changes in connection with land sales and land use could be observed. According to my interviewees, land prices in Kızıltepe had increased more than tenfold since the introduction of irrigation. I was told that the reasons for this massive increase were, on the one hand, the increase in yields due to irrigation. If one did it correctly, so I was frequently informed, then farming the land would make you rich. The larger the area you had at your disposal, the more money you could earn. On the other hand, farmers had also begun to invest more than ever in fixed physical assets such as buildings, reservoirs or irrigation infrastructure including wells, pumps and pipes on their land — assets which in turn were also reflected in the significant increase in property values.

Another reason frequently cited for the rise in the price of land was the government's ongoing land consolidation programme. As I discussed earlier, land consolidation in Kızıltepe was combined with measures to improve rural infrastructure including road construction, the erection of sanitation facilities and the further development and modernisation of the electricity network. The area that these different types of physical infrastructure required was subtracted from arable land that had been expropriated and then consolidated. The landowners I interviewed on this matter, however, were seldom opposed to this practice because they were optimistic that the financial benefits to be gained from land consolidation would far outweigh any loss they may have suffered from having to relinquish what amounted to comparatively small shares of their land.

The increase in land prices was directly noticeable on the local land market. One of my interviewees, an official at Mardin's land registry office told me that "at the moment nobody sells his land without being forced to do so". The farmers were holding on to their property expecting that land prices would continue to climb. At this time, anyone who wanted to purchase land had to be very wealthy, and farmers who sold their land were usually heavily in debt. My interviewee explained further that, because the sale of land occurred in many cases involuntarily — out of dire necessity — many of the sellers were ashamed of their lack of economic success; so hardly anyone openly advertised that their land was for sale. Interestingly, this situation led many others whom I interviewed to believe that "hardly any land [was being] traded" in Mardin and that "the market [was …] completely immobile". But the land registry official whom I had interviewed contradicted this common assumption, claiming instead that, in reality, tens of thousands of hectares of land had changed hands in recent years and that many small farmers in particular had sold their land. This claim was supported in another interview I conducted with a large landowner who said that he had purchased a total of two thousand hectares of land since 2002.

A dynamic that not only explains the rise in agricultural land prices, but which is also responsible for land conversion and the steady decline in the amount of arable land in the province, is that, with rising incomes, new demands for land had emerged.[47] One of these demands was to create space for urban sprawl in the context of a booming real estate market. And in fact, the surge in investment for real estate is attested to by the omnipresence of construction sites throughout the region, particularly in the outskirts of already existing urban areas like the town of Mardin, the town of Kızıltepe, as well as Nusaybin and Şanlıurfa. One of the reasons for this, I was told, was that all over Turkey young families had started to live in their own homes rather than remain under one roof with the extended family. Beyond that,

[47] According to official numbers the total area under production in Kızıltepe decreased by some 40,000 ha from 1995 to 2013 (Turkish Statistical Institute, http://www.turkstat.gov.tr/VeriBilgi.do?alt_id=1006, last accessed 27.06.2016).

several of my interlocutors agreed that owning one's own apartment in the town of Kızıltepe or the town of Mardin was a status symbol almost everyone in the villages were striving for.

While absentee landlordism had been a common phenomenon among large landowners for already quite some time, many successful middle-sized landowners in particular had more recently moved to the urban areas to become "absentee landowners" themselves.

Another reason given for the real estate boom and the associated decline in land under agricultural production was that real estate allegedly represented the only relatively safe investment opportunity in a region characterised by a generally unfavourable economic situation and continued political tension. In other words, successful farmers in Kızıltepe and elsewhere in the region joined the real estate boom simply for lack of better alternatives. One of my interviewees from a real estate firm in Kızıltepe claimed that real estate represented the single most important sink for investment of surplus cash in the region.

Apart from housing projects, land conversion also occurred with the aim to make room for the construction of commercial areas especially along the highways. When I last visited the plain in 2013, a huge shopping mall and a theme park had just opened alongside the highway between the towns of Kızıltepe and Mardin. In addition, both sides of the highway between those towns, as well as long stretches of the Ipek Yolu were strewn with small businesses and petrol stations (the latter being notorious for openly selling gasoline smuggled into Turkey from Iraq and Syria).

Finally, a number of my project interviewees told me about a massive increase in land speculation in Kızıltepe and many other sites within the so-called GAP area. Speculation, it was argued in these conversations, was one of the main reasons for a tight land market and the unchecked increase in land prices. The driving force behind these heightened expectations was said to be, on the one hand, the experience of the boom over the past several years; on the other, it was said to be the announcement of the completion of the GAP sub-projects in Mardin Province. According to the expectations of many, the expansion of the irrigation infrastructure and other state investments across the Kızıltepe plain would lead to further growth in agriculture and other economic sectors, thereby bringing additional benefits to all of the landowners.

8.8 When things turn ugly: Land disputes and social conflict

Another aspect that should be mentioned is that, according to many of my interviewees, there had been some social unrest in connection with the explosion in agricultural sales and land prices. Many farmers lamented that, with the economic boom and all of the money circulating

between neighbours and families, disputes and envy had become the orders of the day. An old farmer in the village of Körsu complained that:

> *"Sons today no longer listen to the elderly… everyone just thinks of himself and only himself. In the past, everyone put the family first … people lived in harmony with [and behaved in an orderly manner toward] one another" (Smallholder interview 2).*

In other cases, disputes over land led to tangible conflicts. During my field research incidents were reported again and again, in which conflicts around land had led to violent and at times lethal confrontations. A whole series of interlocutors reported of acquaintances, relatives or neighbours who were involved in such land conflicts. Against this backdrop, it is worthy of note that the number of conflicts within extended families exceeded those that occurred between neighbours or strangers. The reasons for the escalating disputes, I was told, lay in a general increase in greed and disrespect. Furthermore, young men increasingly challenged the informal decisions of their elders regarding inheritance and succession in the family. In the past, I was told, most young men conformed to the wishes or conceded to the demands of their elders, but today they dared to openly defy them and contravene their decisions.

Another interesting observation with regard to land conflicts in Kızıltepe is that disputes over informal decisions on land inheritance usually also remained in the arena of informal conflict resolution. According to my interlocutors, hereditary conflicts hardly ever found their way into a court of law. When I inquired about the reasons for this, one interviewee explained that family members usually try to shield intra-family disputes from public scrutiny as long as possible. After some time, however, the conflicts would worsen and people would "just snap". Another reason for informal conflict resolution, so I was informed, was that people in Mardin Province generally mistrusted the courts and the police, and that court decisions were usually not accepted anyway.

8.9 A silent revolution: Changes in livestock production

The GAP, irrigation and associated developments in South-east Anatolia also meant considerable changes in animal husbandry. This is not to say that livestock and dairy production had been of no importance in the past. Much to the contrary, small ruminants – sheep and goats especially – formed a major part of the local agrarian economy. Prior to the establishment of irrigation, extensive livestock and dairy production with small ruminants constituted one of the main agricultural activities in dry summer months during which crop cultivation was impossible because of water scarcity. In an arrangement similar to those common in feudal times in Europe and elsewhere, herders in Mardin Province were allowed to graze their flocks freely on the fallow land. Freedom of movement for herders and flocks

was facilitated by the fact that farm fields on the Kızıltepe plain were neither clearly demarcated nor fenced.

For the landowners who opened their land to grazing, this arrangement offered a number of benefits that basically came free of charge. First of all, the landlords were usually remunerated by the herders with a share of the meat, milk, cheese or other livestock-related products. But more than that, seasonal grazing was beneficial because it helped to clear the fields of excess weeds and crop stubble left after the harvest. This was particularly important because, in Mardin's extremely dry climate, organic matter breaks down only very slowly; so leftovers from an earlier crop could impede sowing and maintenance of the following crop. Finally, livestock manure added substantial amounts of organic fertiliser to the soil.

One way to further substantiate the historical relevance of extensive livestock farming in Mardin is to revisit official statistics from the 1990s. Figures 14, 15, 16 and 17 accordingly provide an overview of the officially registered number and distribution of cattle and small ruminants in per cent per agricultural class for the year 1991. The distribution shown here thus represents the situation before the introduction of intensive irrigated agriculture.

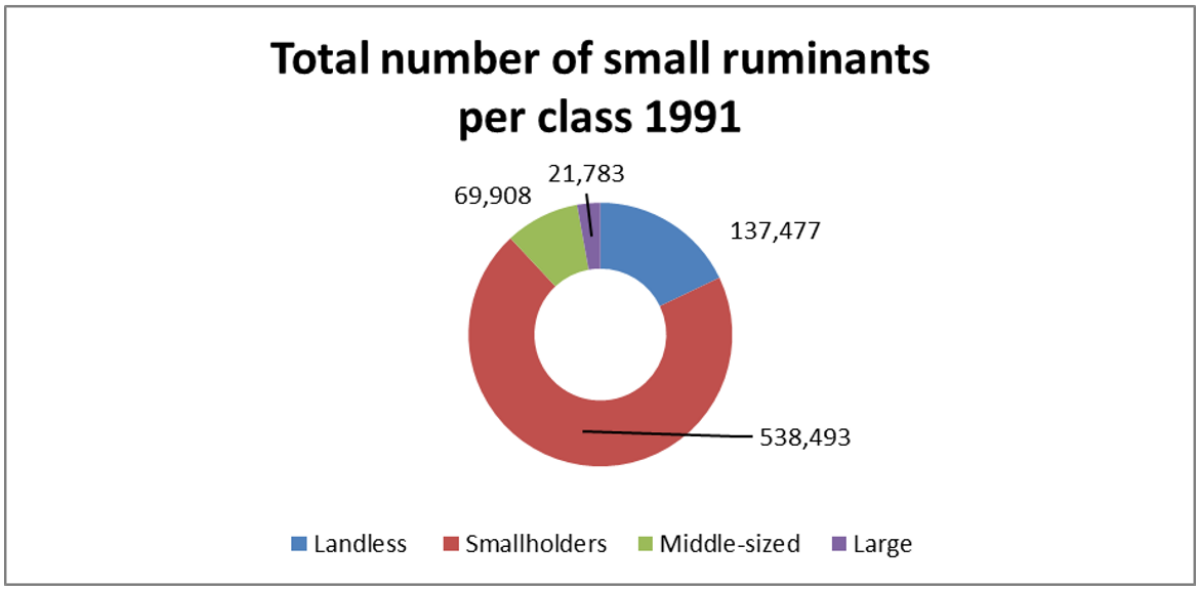

Figure 14: Total number of small ruminants per class 1991[48]

[48] Own drawing; data derived from Turkstat (2016), http://www.turkstat.gov.tr/VeriBilgi.do?alt_id=1006.

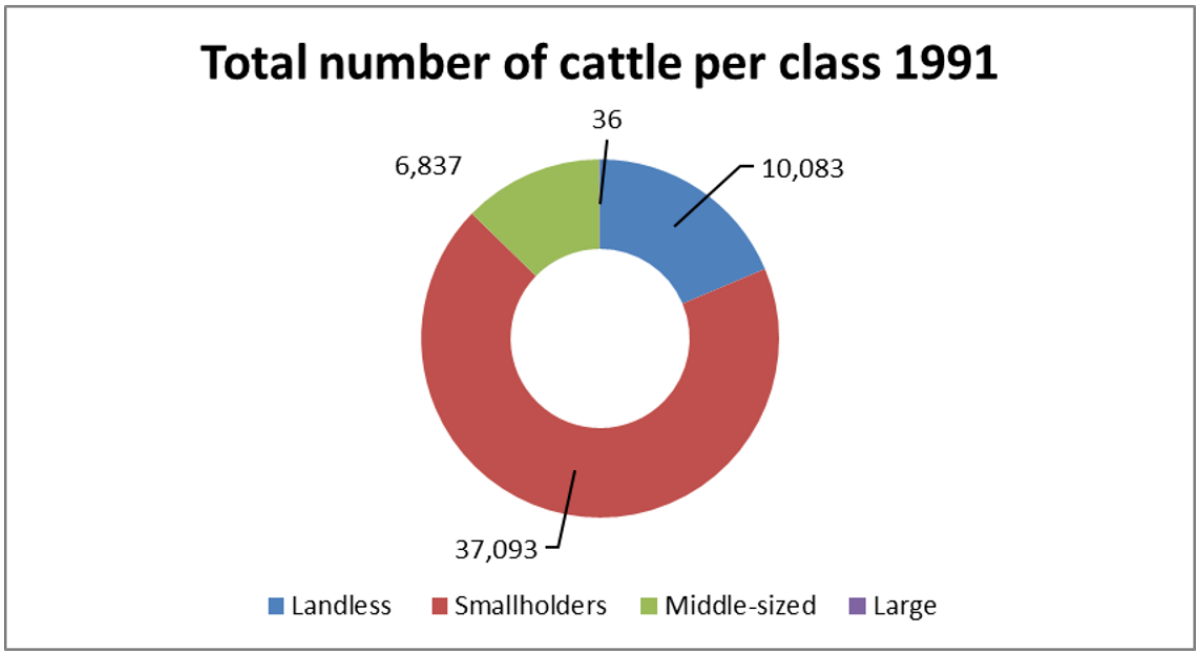

Figure 15: Total number of cattle per class 1991[49]

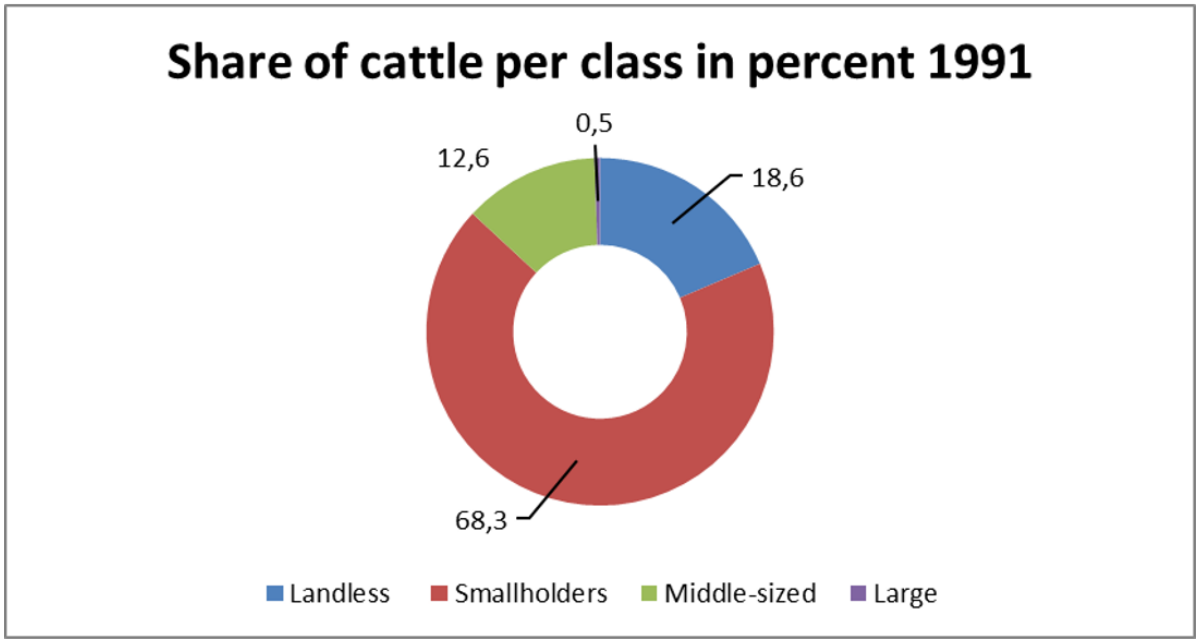

Figure 16: Share of cattle per class in per cent 1991[50]

[49] Own drawing; data derived from Turkstat (2016), http://www.turkstat.gov.tr/VeriBilgi.do?alt_id=1006.

[50] Statistics derived from Turkstat, http://www.turkstat.gov.tr/VeriBilgi.do?alt_id=1006, last accessed 27.06.2016.

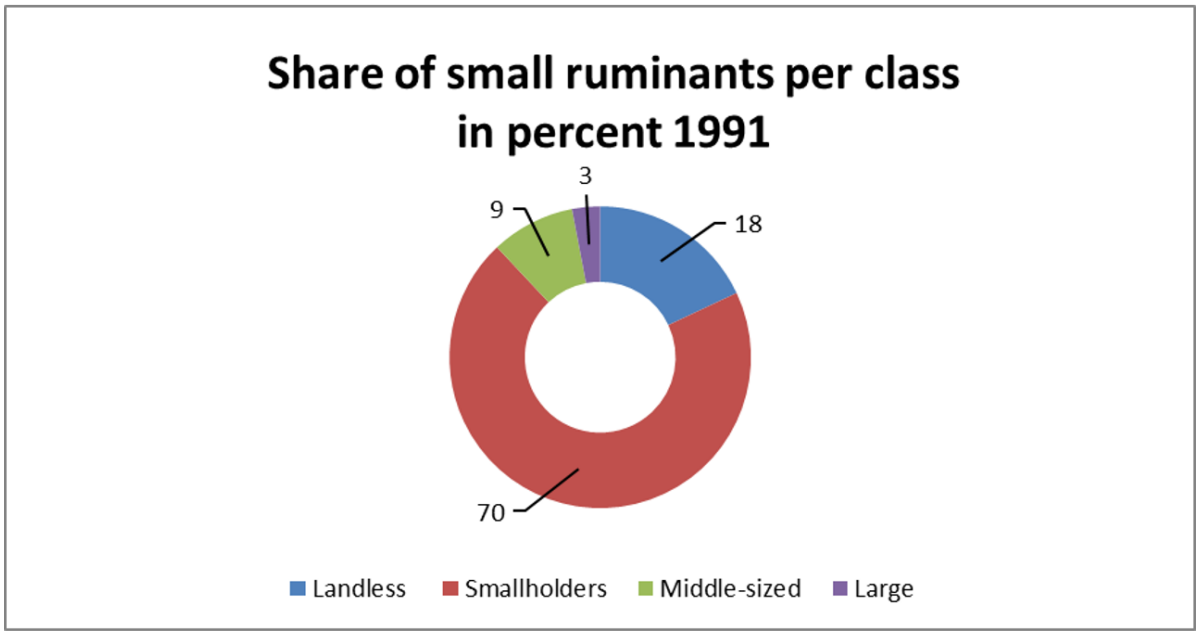

Figure 17: Share of small ruminants per class in per cent 1991[51]

The figures presented here underscore the extent to which Mardin's livestock and dairy production was dominated by small ruminants, amounting to some 767,000 heads in 1991. Cattle, on the other hand, being more expensive and requiring high maintenance and higher quality fodder, only amounted to 54,000 heads.

Another important aspect revealed here is that, in 1991, the majority of livestock was owned and reared by landless and smallholder peasants, rather than by better-off middle-sized and large landowners. Landless farmworkers owned small herds, averaging 24.5 sheep or goats and 1.8 cows. Taken together, the landless class owned almost 18 per cent of all small ruminants and nearly 19 per cent of large ruminants in Mardin. Smallholder peasants with land holdings between 0.5 and five hectares accounted for 37 per cent of all small ruminants and 47 per cent of all large ruminants. Extensive livestock and dairy production would provide these groups with important subsistence and cash income. In addition to being largely excluded from the formal credit market, livestock functioned as an important financial asset that could be used as a guarantee for a private mortgage from ones' neighbours or a local landlord. Moreover, in the absence of cash, livestock was commonly used as a dowry.

At the time of my fieldwork in 2012 and 2013, there were hardly any substantial flocks of small ruminants left on the Kızıltepe plain to observe. Except for a few goats and sheep feeding on narrow stretches of grass along the road shoulders, there seemed to be no other small animal herding left in Kızıltepe, nor in any other district that I visited. The sudden

[51] Statistics derived from Turkstat, http://www.turkstat.gov.tr/VeriBilgi.do?alt_id=1006, last accessed 27.06.2016.

decline in small-ruminant livestock production, so I was told, was a direct consequence of irrigation agriculture and its associated extension of the growing season. Another reason was clearly the Turkish state's intervention into animal husbandry. As I pointed out earlier, livestock raising, especially for industrialised dairy production, received strong emphasis and support in the context of the various government programmes. Intensive dairy farming is nowadays undertaken by only a few specialised farms operating with a high degree of mechanisation, including state-of-the art milking machines, feed spreaders and silage machines, none of which were in Kızıltepe in 1991.

Many of my interlocutors reported, that with the emergence of irrigation and intensive production, smallholders and landless peasants had sold or slaughtered almost all of their livestock, ending their previous engagement as herders. Other than was claimed by one of my interlocutors from the agricultural administration in Mardin Merkez, the reason for this was neither a lack of economic sense nor a sudden urge to make quick and easy money from selling off livestock: rather, the reason was that extensive livestock production which had for decades (even centuries) complemented extensive crop farming, suddenly had to compete with intensive crop production. Extensive animal husbandry generated less money than irrigated cash crops like wheat, cotton and maize, making it more profitable for farmers to plant crops year-round. More importantly, however, earnings generated from land use during summers now flowed exclusively into the pockets of the landed class.

And what about the numerous benefits that used to come with grazing? At the time of my field research, the crop producers on the Kızıltepe plain had simply turned burning off crop stubble as an alternative method of land clearing in preparation for the next planting. A visitor coming to Mardin right after harvest could thus find the whole plain bathed in the orange glow and smoke of thousands of field fires. This fundamental change in the practice of land clearing has not only resulted in a revolution of long-standing relations of production between landless herders and landed farmers, but it has also had significant environmental and health impacts on the people living on the plain.

9 Changing relations of production and reproduction

The previous chapter discussed a variety of manifestations of agrarian structural change in Kızıltepe. Building on this description, I will now reflect on the social and economic consequences of this development. The first part of the chapter focusses on the consequences for each of the groups of actors, namely, large landowners, middle-sized family farms, smallholder peasants and landless agricultural workers. Each group will be discussed separately for reasons of better clarity and differentiability. The discussion reflects on observable frequencies and tendencies which can be interpreted in the sense of group-specific generalisations.[52] For example, while not all representatives of middle-sized family farms were exposed to increased financial risks in the course of intensification, such examples could be found far more frequently within that group than within the group of large landowners. This observation allows us to conclude that middle-sized family farms find it comparatively harder than their land-rich neighbours to operate successfully under the changed circumstances.

In the second part of the chapter, a much broader assessment of the successes and failures of the Turkish state's agricultural development programmes is offered. I discuss and appraise the developments in Kızıltepe with a view to their social, economic and ecological impacts. In so doing, I also present some assumptions about possible future development of the South-east Anatolia region as a whole. In keeping with the broad scope of this chapter, I present numerous points of departure for critical discussion, as well as point to a variety of new questions that could be addressed in the context of future research.

9.1 Those who have, will get more: Large landowners, powerful aşirets and agri-businesses

Large landowners, powerful aşirets and agri-businesses are undoubtedly the "winners" after the structural changes in Kızıltepe's agricultural sector. First, the large landowners — with or without tribal affiliation — profited handsomely from the numerous state investments in the rural area. Infrastructure measures such as those carried out as part of the government's land-consolidation scheme or the GAP resulted in significant upgrading of the landowners' property

[52] In making these generalisations, I also wish to emphasise that the way in which the representatives of one group experienced the structural changes was often closely related to the actions and decisions of representatives of another group and vice versa. Furthermore, discussing the consequences of agrarian change at the level of the group should not be understood as an attempt to omit the fact that individual actors may have very diverging perspectives and experiences from those held by other individuals within one and the same group. Thus, within each of the groups described, there are both proponents and critics of the development that has taken place. There are also actors in all groups who are either "winners" or "losers" with respect to the changes that have taken place.

without their having had to contribute to the funding of those measures. The expansion of roads, telecommunications networks, the electricity grid, sanitation infrastructure and irrigation canals were entirely publicly funded. Just considering the increase in value of agricultural land in Kızıltepe alone, the Turkish state managed to multiply the landowners' assets many times over, through the use of public funds, within the space of little more than a decade.

Rural infrastructural improvements not only affected the value of land, they also meant a significant reduction in costs to agricultural producers. For example, improved accessibility meant lower costs and less time that have to be spent on transport. Being connected to the telecommunications network also translated into lower costs and time saving for large landowners and large-scale producers in the procurement of information. Finally, being connected to state-financed and managed irrigation canals made private investment for the provision of water obsolete or at least comparatively cheaper.

In addition to the significant economic benefits accrued by the landowning class from improved rural infrastructure, there were numerous subsidies, support programmes and other financial incentives from which they benefitted. It is important to point out that the various support mechanisms were developed with the aim of intensifying and increasing production throughout the South-east Anatolian region. As a result, these programmes did not explicitly target structurally disadvantaged farmers or underfinanced farms. Nor were any caps introduced, for example, on agricultural inputs like fertilisers, pesticides or herbicides, intended to prevent chemical overuse and environmental damage. Without such parameters, subsidies for seeds, diesel and fertilisers flowed to the financially powerful, large landowners. Moreover, those landowners benefitted further from discounted loans, tax exemptions and grants for the purchase of machinery and irrigation technologies. Like other producers, they also profited from government-supported prices set by the TMO for their harvest. Finally, large landowners benefitted from free access to electricity, which I described above as shadow subsidy.

The fact that Kızıltepe's large landowners profited from state investment and the Turkish government's support programmes is not remarkable in itself, especially since large, wealthy landholders formally belonged to the entitled recipients. What is important to note here is that the large landowners constitute a group of rural actors that were already in a financially and politically privileged position prior to the start of state intervention.

Another aspect that deserves mention is that any landowner who could afford to purchase additional land should also be regarded as a beneficiary of the structural changes, because of the sharp rise in agricultural productivity and the continuing increase in property values. My interviews suggest that a large part of the land offered for sale in Kızıltepe between 2000 and

2013 was in fact bought either by large local landowners or by financially strong players from outside the region. Here, it is particularly important to emphasise that Turkish state intervention triggered a local land-market dynamic which allowed the large landowners to increase their already significant holdings. The increase in farm indebtedness due to the costs of agricultural intensification also played a role in this dynamic: financially less well-off small- and middle-sized farmers were continually forced to sell off their properties, leading to a steady increase the supply of land available for purchase. However, the rapid increase in land prices meant that only buyers with the respective financial means were able to become active on the land market. Thus large landowners were the only group who could really afford to purchase additional land in a market heated up by real and speculative profit expectations.

In addition to the profits that the large landowners were able to earn directly from intensified agriculture and the expansion of their land, they also profited from multiplier effects of economic growth outside agricultural production. I was able to observe how some large landowner families successfully expanded their existing enterprises or established new businesses both within and outside of agriculture. Against this background, the promotion of investors in South-east Anatolia, for example in the form of value-added tax exemptions or discounted loans, had a decisive influence. The representatives of this group, with whom I spoke personally, all belonged to influential aşirets. While at this point no well-founded judgement can be made as to whether the family organisation of these aşirets had an influence on the success of the entrepreneurial activities of these actors. It was nevertheless noticeable that different forms of mutual cooperation between businesses owned by relatives from the (extended) family were a common practice.

In view of the increase in profits that the group of large landowners were able to achieve, it is not surprising that the structural changes in Kızıltepe are seen by members of that group predominantly in a positive light. One large landowner, for example, raved about the recent development of agriculture in South-east Anatolia

> *"Everyone in the region nowadays has the chance to be successful" (Large landowner interview 2).*

In this context, descriptions of the large landowners' respective personal situations and roles are also interesting. Whereas some interviewees presented themselves as competent, successful and independent entrepreneurs, others projected an image of the farmer in need of support and protection. Describing oneself as a successful entrepreneur was often a way of distinguishing oneself from the smallholders who were generally regarded as backward, inefficient, and an impediment to agricultural modernisation. Many large landowners liked to present themselves as contributors to the region's overall progress.

Self-descriptions by the aşirets regarding their role and influence (described in detail above) also appeared to vary. Among the aşirets, the tendency to either emphasise one's role and influence or to play them down to irrelevance (or to discount them altogether) seemed to be a matter of opportunism and/or convenience. For example, I observed that, when the topic of discussion was the widespread accusation of abuse of power by large families, an agha was likely to claim that the aşirets were factually history and that he himself had hardly any influence at all anymore, only to stress, in the very next breath, his pivotal role as a guarantor of social peace.

This strategic self-representation is interesting, as it indicates a great deal of reflection on the part of the large landowners regarding the ambivalent public perception of their role. Accordingly, narratives such as those described above can be understood as an attempt to influence this perception in the sense of projecting a more favourable image. So, in an effort to reject being seen as a symbol of backward cultural norms and practices, my interviewees seemed to be trying to attribute to themselves an image that would embody the vision of cultural, social and economic modernisation of the Turkish state. The traditional and strongly hierarchically organised Kurdish aşirets and their leaders had no place in this vision. However, the fact that the aşirets arose in other conversational contexts again and again, in which they were portrayed as influential family organisations, indicates that the development in Kızıltepe has been one in which a multitude of new institutions coexists alongside the older traditional ones today. And this stands in marked contrast to the Turkish state's vision.

9.2 Between opportunity and risk: Middle-sized family farms

For representatives of middle-sized family farms the structural changes in Kızıltepe's agriculture in the period from 2000 to 2013 are tantamount to a fundamental reorientation of their way of life and work. The central step in the context of this reorientation was undoubtedly the transition from extensive rain-fed agriculture to intensive groundwater-irrigated agriculture. With the advent of irrigation, farms made substantial investments in modern agricultural machinery, most notably the purchase of tractors, combine harvesters and cotton pickers. With almost unlimited access to water and modern machinery, the farmers achieved a significant extension of the cultivation period and a fourfold increase in productivity per hectare. In addition, irrigation enabled the cultivation of demanding cash crops like maize and cotton.

In addition to the changes brought about by mechanised irrigation agriculture and the socioeconomic consequences of it for the middle-sized farms (discussed in detail above), irrigation also resulted in the adoption of a many completely new types of transactions and actor relationships — some connected directly to irrigation, others involving stakeholder

relationships, marketing of the harvest or financing of the production process. In retrospect, many of the farmers I talked to perceived these novel transactions and actor relationships as major challenges to be overcome; it was a gradual learning process in conjunction with new institutional arrangements.

The crucial importance of learning and adapting to novel transactions and actor constellations has been highlighted in many other cases of agrarian reform. Frank Uekötter (2012) shows how, in the context of the structural changes in Germany's agriculture after World War II, farmers' economic survival depended as much on learning as on upscaling. In other words, the question whether a farm survived and prospered was not only driven by the notorious logic of *wachsen oder weichen* (grow or stand aside/move on), but also by a logic which Uekötter calls *lern oder stirb* (learn or perish) (Uekötter 2012: 19). The economic success or failure of midsized farmers thus depended in part on their skills. Their ability to learn can be interpreted as renewed proof of the existence and relevance of their agency. This also explains why, contrary to what is often claimed in orthodox Marxist theory, very different results often emerge among the individuals of one class in dealing with the pressure for change caused by agricultural policy.

Returning to Kızıltepe, with the reorientation of production, a number of other, sometimes long-lived transactions and relationships became comparatively less important. As an example, the practice of grazing fallow land in the summer disappeared with the extension of the cultivation period. It should be noted that, with the disappearance and irrelevancy of this long-standing, traditional institutional arrangement, daily interactions between landowners and landless agricultural workers also decreased. But how can the changes be assessed from the point of view of middle-sized farmers? Like the large landowners, middle-sized family farms undoubtedly benefitted from the abundance of state investment in rural infrastructure. Once again, we can look to the enormous increase in the value of agricultural land in Kızıltepe as well as to the cost advantages resulting from the infrastructural improvements for production and marketing, in trying to answer this question.

Middle-sized farmers benefitted equally from support programmes for the purchase and operation of machinery and irrigation technologies. Ultimately, they also benefitted greatly from discounted loans, subsidies and grain purchases by the TMO. But there are good reasons to suppose that the impacts of these measures were far greater for middle-sized farmers than they were for many of the large landowners who were already in a significantly more advantageous socioeconomic position before state interventions "raised the ante" for everyone. If we consider state investment and subsidies just by themselves, then it can be argued that the state-sponsored structural change in Kızıltepe also made middle-sized farmers "winners". The validity of this conjecture is further underpinned by the fact that members of

this group would have found it difficult to impossible to achieve the enormous increases in production and turnover from agriculture that occurred, had they had to rely solely on their own resources.

However, with a view to the social and economic consequences of the intensification, I have highlighted a number of aspects which also point to significant financial risks and various constraints. I showed, for example, that engaging in intensified agricultural production meant a greater need for recurring investment from a farmer's own resources. For many farmers, this meant that their production costs had to be pre-financed by debt. In turn, this meant that crop failures, a reduction in subsidies or a sudden collapse in agricultural commodity prices could quickly lead to a situation endangering the livelihood of middle-sized operations. The situation of increased opportunities in conjunction with increased risks described here I have labelled as a "gamble". In Marxian agrarian political economy terms this situation can also be referred to as a "simple reproduction squeeze", that is, "a process of pressure on the reproduction of petty commodity producers as either or both capital and labour, associated with the commodification of subsistence and often leading to depeasantisation" (Bernstein 2010: 125).

The vulnerability of middle-sized farms is even more apparent when one considers that the economic success of these farms depended not only on the personal skills of farmers as claimed above, but also to a likely much greater extent on factors that lay outside their personal sphere of influence. In this regard one can point to the uncertainties that generally exist in the context of production in the so-called nature-related sectors; more specific to the South-east Anatolian context described here, however, one can also point to access to state support and protection which are undoubtedly of equal, if not greater importance. While farmers in Kızıltepe repeatedly attempted to draw attention to their situation and tried to influence public perception in their favour, the harsh reality was that they had no actual influence the on political decisions that determined the state's agricultural policies.

Ultimately, with the stronger orientation of agricultural production towards export-oriented cash crops, the development of international markets also played an increasingly important role. There is no doubt that the farmers in South-east Anatolia had no influence at all on international developments — a circumstance that once again emphasises the dependence of farmers on price-supported purchases by the TMO as a buffer against volatilities. Farmers in the region have always been exposed to environmental uncertainties; all the same, state support and protection against price volatilities on the world market have existed in Turkey since the 1930s (chapter 3). But, although Kızıltepe farmers had far lower profits before the advent of irrigation, they also had comparatively lower economic risks to contend with. Extensive agriculture as practised in the past, for example, required far less capital for the production process. Furthermore, compared to the modern high-performance varieties of

cotton and maize cultivated today, many of the traditional crops such as sorghum or lentils were more resilient to unfavourable environmental conditions such as drought, heat or disease. This meant that the risk to farmers of crop failure or significant losses in quality under the old cultivation regime was therefore comparatively lower.

Finally, one can also argue that engaging in export-oriented irrigation agriculture has meant that small- and middle-sized farmers have had to give up some of the flexibility they had in the past for dealing with environmental risks and market uncertainties. This flexibility included the ability of small farmers to switch to subsistence farming in the event of an unfavourable market situation, thus allowing them to survive independently of the market and its fluctuations. In such a case, excess family labour can either be invested in subsistence production or shifted to different forms of off-farm employment. However, in the context of irrigated agriculture, the farmers' comprehensive investments in fixed assets and in ongoing production have created a new form of path dependency, making it difficult for them to fully or partially abandon the production of irrigated cash crops in the event of a crisis.

How do the middle-sized farmers themselves assess their situation? Important for an overall evaluation of the structural change by middle-sized farmers is that the representatives of this group — almost without exception — welcomed the agricultural development reforms in Kızıltepe. My interlocutors argued unisono that despite all the risks and despite the large number of indebted farms, their situation was as good as it ever had been before. Many farmers referred to the amenities from their newly attained material prosperity or to the generally perceptible economic upswing in the region. In other situations they told me, with open pride, of record yields or the purchase of brand new machines, always pointing out that such successes had not been possible before the introduction of irrigation. Beyond these positive images of general progress, my interlocutors also felt that a return to the extensive and semi-subsistence production system was not only undesirable, but also inconceivable. The structural change was described as a largely positive, but also irreversible process. All the same — and this observation seems equally important for the assessment made here — the interviewees repeatedly pointed to the economic vulnerability of farms and their expectation that the state would fulfil its role as protector and promoter of farmers and agriculture.

9.3 The have-nots: Smallholders and landless workers

Looking at the results from the previous sections, there is much to suggest that smallholder peasants and landless farmworkers have emerged as clear "losers" of the structural changes to Kızıltepe's agriculture. And indeed, a whole series of developments can be pointed to that underpin this assumption. At the same time, there is a need for a differentiated perspective in order to fully grasp the complexity of the consequences.

9.3.1 Smallholder peasants

Probably the most important observation to make with regard to the situation and the role of smallholder peasants is that the technology-based agricultural intensification which occurred in the period 2000–2013 was carried out almost exclusively by the middle-sized or large-landowner classes. My interviews and observations suggest that small landowners and landless farmworkers were almost completely excluded from having any active role in the sector's transition to intensive agriculture.

Smallholders and landless workers had only very limited agency in the process. For them, the structural changes occurred mainly in the sense of immutable facts. Their limited capacity to act and their largely passive role can be explained in particular by the fact that these actors simply lacked economic and political resources necessary for active participation in the South-east Anatolian agricultural development process. Although smallholder peasants represent a majority of Kızıltepe's rural population, most of them were unable to shift to technology-based intensive agriculture for two main reasons: first, because they lacked the equity capital and fixed assets necessary for taking out a mortgage or obtaining a loan to co-finance investments into intensification; second, because the specific criteria to be met for receiving state subsidies prevented them from participating on purely formal grounds.

First of all, the state declared that a minimum farm size of 200 decare (20 ha) was necessary to quality for the co-financing programme. The same applies to the criteria set for agricultural loans or the promotion of private enterprises in the region: smallholder peasants were formally excluded. What follows from this is that smallholder peasants were thus unable to co-finance the purchase of new machinery or to invest in irrigation equipment. In summary, then, even after the introduction of the numerous state subsidy programmes and despite the massive state investment, many smallholders were still financially unable to participate in the agricultural-sectoral upswing. The prohibitively high cost of entry combined with formal exclusion from nearly all central support programmes meant that these actors were condemned to a situation that can best be described as "too poor to farm".

The exclusion of smallholders from the opportunities of structural change was far-reaching. It can be seen not only with regard to their limited access to financing, but also in their interaction with state or financial-sector representatives. As a case in point, representatives from the group of smallholder peasants told me repeatedly that they did not have sufficient information about the state's few support programmes for which they were actually eligible, like subsidies for seeds, fuel or fertiliser; nor did they know much about the planned infrastructure measures on the plain. In stark contrast to this, medium-sized and large landowners commonly reported that representatives from the state agricultural administration and from the banks involved in the programmes had actively approached them in order to

inform them about the possibilities of funding and the overall development plans for the Kızıltepe plain. The few smallholder peasants who told me that they had been informed about the programmes in advance, reported nevertheless that high transaction costs and other problems were prohibitive regarding their ability to apply for such subsidies. For example, a smallholder farmer who had asked for information on current agricultural subsidies just a few months before I met with him for the interview, claimed that he had asked for an appointment several times, all to no avail. He explained his unsuccessful dealings with the authorities by the fact that he had no personal contacts to anyone involved in these programmes and that other people generally looked down on "people like him". Other smallholders and landless peasants reported similarly; they were ashamed of their poverty and the simplicity of their means, especially if they had to go to the bank to ask for a loan, or whenever officers of the agricultural administration extension services paid a rare visit to their farms and homes.

My interlocutors in the agricultural administration denied that any form of unequal treatment based on class or ethnicity existed, but the way that some of them spoke about the farmers in Kızıltepe revealed a strong bias: they often perceived smallholders and landless farmworkers as uneducated, culturally backward and unreasonable with regard to financial matters. Such biases revealed in statements are reminiscent of the notorious practice already discussed of singling out, characterising or dismissing smallholders based upon negative stereotypes and deep-seated prejudices. They also remind us of the previously discussed idea of the *Traditionsbremse* which brands smallholder agriculture as an obstacle on the road to modernity.

As a result of the unequal access to irrigation and mechanisation, changes in land use and the massive increases in yields were largely limited to areas occupied by medium-sized and large landowners. An exception were situations in which smallholders allowed their land be irrigated by their richer neighbours usually for some form of recompense; or, more frequently, in situations in which the smallholders had either leased or sold their land to their richer neighbours. In such cases, it can be argued that the smallholders participated indirectly, with relatively little active effort, in the growth of the sector. The smallholders' profits generated from leasing their land to their wealthier neighbors were often much smaller than what would be expected in a booming agricultural sector. This is because middle-sized or large landowners could basically approach smallholders with "a take it or leave it" offer — a situation which reflected the major advantage in bargaining power held by the lessee over the leaser. The profits from selling ones' land were allegedly unaffected by such lopsided bargaining power, since a smallholder would receive a lump sum, paid once and never again.

But how did the small farmers themselves evaluate the changes described? Unlike the situation for medium-sized and large landowners, the picture for small farmers is, as expected, more

ambivalent. There were voices stating that agriculture had hardly paid off on their land anyway and that jobs outside agriculture were usually more attractive and more profitable today. The work in the countryside was said to have been cumbersome and life in the village offered little comfort. The opportunity to either lease or sell one's land and to withdraw from active farming was thus regarded as a welcomed opportunity. Many former smallholders actually used the opportunity to sell their land to move to a larger town and to reinvest their earnings from the sale in an apartment or a small shop. At the same time, selling the family's land was commonly seen as a shameful act, ownership of even the smallest plot being regarded traditionally as a source of family honour, economic independence and local affiliation. Therefore many sellers, I was told, avoided talking publicly about their intentions. One way of trying to deal with this moral dilemma was to sell the land only to one's close relatives or, as the second best option, to neighbours within the village. This would at least guarantee to a certain extent that the family could keep a connection to the land and the village. In the meantime, criticism was beginning to be voiced repeatedly of the Turkish state's selective development policies. The state, I was told, was generally only concerned with the interests of those who were already in a good position — large landowners and middle-sized farms. Nobody cared about the poor. Many interlocutors argued resignedly that this unequal treatment by the Turkish state was what they had expected: "people like them" never received the support they needed.

9.3.2 Landless farmworkers

Landless farmworkers are undoubtedly the biggest "losers" of the structural changes in Kızıltepe's. In chapter 8, I described in detail how the demand for manual labour had gradually collapsed due to increasing mechanisation of production. Modern and efficient agricultural machinery, the purchase of which was made possible by government subsidy programmes, has now replaced thousands of agricultural workers.

Rather than employing a large number of unskilled workers, the demand on the local labour market is now geared towards a very small number of well-trained farmhands. However, these (also well-paid) farmhands are not usually recruited from the group of generally poorly trained landless farmworkers. In practice, this means that the vast majority of landless farmworkers either do not find any employment at all in agriculture, or that the landowners offer work at wages or conditions that are no longer sufficient for the working families to survive. The decline in the demand for unskilled manual labour has affected thousands of daily wage labourers, who generally migrated from farm to farm to work to support their livelihood. Apart from the migrant labourers (many of whom came to Kızıltepe from outside the region), the loss of employment opportunities also affected people who were actually an integral part of the village communities. This includes relatively independent landless families who worked for a single landowner within the framework of various sharecropping arrangements. It further

includes people who worked within the framework of the infamous Azap system in semi-feudal dependency on a large landowner.

The consequence of the dwindling demand for unskilled manual labour has been the loss of income from agriculture and the need to find alternative employment opportunities in other sectors. Many former farmworkers are now employed under extremely precarious conditions in construction. In contrast to agricultural work, where long-term relationships with the landowners and affiliation to the village community had often served to protect workers to a degree against exploitation and injustice, work in the construction industry is completely anonymous and extremely insecure. The loss of agricultural employment is also linked to the fact that many families had to leave their villages at short notice. The reason for this is that the right to accommodation and, in some cases, access to a small plot of land in the village, was part of the remuneration for their work above and beyond an actual wage. With the loss of their jobs, these families suddenly also lost their homes and these tiny private plots which had served as an important source of subsistence.

Finally, one aspect that must also be considered in this context is the displacement of extensive pasture farming as a result of the intensification of plant production. As a consequence of state-financed irrigation agriculture, an entire economic sector has de facto collapsed, the main actors and beneficiaries of which used to be landless agricultural workers and smallholder farmers. As in the case of the smallholders, landless farmworkers were not given any incentives to benefit from the agricultural change in any way, nor were they given any kind of support enabling them to better cope with the consequences of change.

10 Assessing Kızıltepe's present development trajectory

If we look at the figures or just at the changes clearly visible throughout the South-east Anatolian region, Turkish government intervention to modernise agriculture on the Kızıltepe plain could indeed be framed as an impressive success story.

The results of this study clearly show, for example, that the Turkish state succeeded in achieving a significant intensification and modernisation of agriculture within little more than a decade. Large parts of the Kızıltepe plain are irrigated today. A majority of middle-sized and large farms have access to modern, efficient agricultural machinery. Exportable cash crops such as maize, wheat and cotton dominate land use, and farmers reap harvests that are on average four times larger than in the period before state-subsidised intensification. In addition, it was possible to further consolidate land and concentrate farms in the region, and thus to counteract what the state perceived as one of the main causes for the notorious underdevelopment of the region's agricultural sector. The Turkish state also succeeded in establishing a modern and diversified agricultural economy upstream and downstream of production, which has indirectly helped other sectors to achieve economic upswing. Arguably, these secondary impacts can be seen to correspond to the government's declared objective to develop other economic sectors and create new jobs outside of agriculture.

It can be argued further that the role and influence of the state itself changed in the course of the developments described. Today, the state is far more present in the region and more important than it was before the agrarian reforms were initiated in South-east Anatolia. This is due partly to the resulting increased dependence of farmers on public support and protection. Leila Harris (2008 and 2009) has drawn a similar conclusion in her studies of the GAP pilot project and changing state–society relations on the neighbouring Harran plain.

The physical infrastructure built by the state can also be interpreted as a means for central government to reduce the remoteness of the region, and to gain political access to it.[53] In keeping with Şerif Mardin's (1973) perspective of centre–periphery dynamics in Turkey, we can argue that this in fact has been the case: Turkey's agricultural development policy in the decade described here has led to a narrowing of the physical and political distance between the political power centre in Ankara and parts of the rural population in the South-east Anatolian periphery.

[53] Dirk Van Laak (2001, 2014, and 2016) describes infrastructures like dams, irrigation channels, roads or telecommunication networks as first order media of social integration. Along similar lines Brian Larkin (2013) argues that technological infrastructures, including irrigation networks, are "material forms that allow for the possibility of exchange over space. They are the physical networks through which goods, ideas, waste, power, people, and finance are trafficked."

Overall, the consequences of these diverse developments unquestionably represent a fundamental transformation of agricultural production conditions and relationships. This transformation is unparalleled in the history of Kızıltepe in terms of both scale and scope.

10.1 Prosperity for all? Kızıltepe's social development trajectory

Although the structural changes in Kızıltepe appear at initial glance to reflect the successes of government action, the results of my work also point to a number of developments that call this optimistic reading to question.

One central question to be raised in this context is whether state-driven agricultural development is socially sustainable. The above discussion of the fate of small farms and landless agricultural workers has already shown that large sections of the rural population were not only excluded from the benefits of agricultural development, but that many of these people have fared far worse than before. This rests primarily on the fact that there is significantly less need for unskilled manual labour since the agrarian reforms. However, if fewer jobs are available for these people, then, in keeping with the mandate and responsibilities of the welfare state, alternative opportunities and/or a functioning social safety net ought to be in place to cushion the impacts of the changes in the agricultural sector. But social welfare was apparently never a part of the measures implemented.

I have pointed out some developments which can be interpreted as multiplier effects triggered by the agricultural boom. In this regard, the growth and diversification of agribusiness and the emergence of a dynamic real estate sector are particularly noteworthy. The increasing turnover from agriculture has been reinvested in other sectors and thus contributes to overall economic growth and the creation of new jobs. However, it is also obvious that the beneficiaries of these new areas of commerce have only rarely been local smallholders or landless laborers.

My conversations with landless peasants and migrant farmworkers about the precarious employment conditions in Mardin's construction industry again suggest that either there was principally no adequate social welfare system in place or that, if there were or had been, then these people in particular did not have sufficient access to it. The situation for landless seasonal workers from Syria, for example, must be regarded as particularly precarious; due to their status as illegal immigrants, they have no formal right to occupational health (insurance) or other social benefits even if these were provided.

Smallholders who own small plots of land are much better equipped to deal with structural changes than workers without land. As mentioned earlier, many smallholders may choose to lease their land or to sell it and invest the return in a small business or an apartment in one of

the towns, Kızıltepe or Mardin. This possibility was obviously not available to the landless agricultural workers.

Whether the agricultural development on the Kızıltepe plain is socially sustainable is relevant but highly sensitive issue from a number of perspectives. First of all, the project provided an opportunity with which to put the development promises and claims of the Turkish state to test. For decades, social objectives such as poverty reduction, income equity, education and greater participation have been among the central arguments given by the Turkish state to justify (to its domestic public and to the international public) its interventions in South-east Anatolia. The GAP has operated officially as a sustainable human development project since 1995; its plethora of presentations, reports and other public contributions by its administration regularly point to the alleged social sustainability of the project.

However, the situation I have described, in which the middle-sized enterprises and in particular the large landowners emerge as winners of agricultural change, while the rural poor are left largely empty-handed, shows that the Turkish state, despite its efforts, has not brought about any significant change in the massive historical social inequality that has characterised and typified the region. In other words, if the rural poor benefitted neither from the boom in agriculture nor from the economic multiplier effects in other sectors and, at the same time, if the social welfare system failed to provide a safety net to offset the negative impacts of the changes in the rural labour market, then the Turkish state has failed to deliver on its development promise. Moreover, it can even be argued that, through its intervention in the region's agricultural sector, the state has actually contributed to a further solidifying and aggravation of, if not an increase in, the already glaring social inequality among South-east Anatolia's population.

At this point, further research and detailed analysis of economic development over the long run — in agriculture and other sectors in the region — is necessary. This must also include an inquiry into the long-term impacts for marginalised segments of the population — in particular the fate of seasonal agricultural workers from Syria will need to be further examined. Further research would not only be useful for examining and further developing the assumptions I have made here; it could also provide the grounds for more differentiated and specific policy recommendations.

10.2 A model for the future? Kızıltepe's economic development trajectory

In evaluating Turkey's agricultural development policy, another important aspect to consider is whether the successes described above are economically sustainable. In particular, we would want to determine whether farmers in the region would be able to manage without

continued, massive financial and political support from the state and if growth and the structural changes can be sustained without state protection.

The Turkish state claims to have invested more than 100 billion Turkish Lira within the framework of the GAP (GAP Regional Development Administration 2016). Large shares of these investments have directly or indirectly benefitted regional agriculture (ibid.). In addition, billions more were invested in regional agriculture over the same period in the form of various subsidies, cheap loans and grants, price-supported grain purchases, or indirectly — as a kind of shadow subsidy — through free access to water, electricity and improved rural infrastructure.

I have examined the impact of some of these support programmes in the context of the Kızıltepe plain and shown that the abundant financial resources of these programmes have been decisive in many respects for the transformation of agriculture there. Particularly noteworthy in this regard are support for the purchase of pumps and irrigation technologies and of heavy agricultural machinery, as well as subsidies for other agricultural inputs and the price-supported purchases by the TMO. Many of my interview partners from Kızıltepe's farming community in fact argued that state support is an irrefutable prerequisite for agricultural prosperity and that most farmers could not generate a livelihood without state subsidies. Others complained that the subsidies were still far too low, or that the TMO's prices for crops like cotton and wheat generated barely enough income for farmers to live on. The discussion about possible fees for water and electricity went in a similar vein, with the farmers insisting that they could not afford to pay water or electricity charges. The example of cotton pricing can be seen as a clever appeal to the Turkish state. The message to the authorities was something along the lines of this: "If you want us farmers to make the region the new centre of cotton production, you have to guarantee us prices that make the cultivation profitable. Otherwise you cannot count on us."[54]

It is not possible to determine conclusively how truthfully these statements reflected the actual economic situation of the agricultural producers. Thus it is possible that, in some cases, those kinds of arguments were made by individuals who merely sought to maximise their profits or who sought to gain preferential treatment. Many middle-sized farmers who put forward these sorts of arguments were undoubtedly under such economic pressure that the retraction of state

[54] In support of this hypothesis, farmers in Kızıltepe not only told me this story personally, they also repeated it frequently to the Turkish press. The online edition of *Dogru Haber* from 3 October 2016, for example, carried a story indicating that farmers and workers in Kızıltepe were suffering from the low prices for cotton and that lack of support by the state was responsible for this misery (see: https://dogruhaber.com.tr/haber/223483-Bolgedeki-pamuk-ureticileri-ve-isciler-dertli/). The public blockade of the Ipek Yolu as a protest against inadequate electricity supply, to which I referred in the previous chapter, stands as a further example.

aid would have brought them to the brink of collapse and jeopardised regional development as a whole.

The repercussions of an economic crisis affecting small- and middle-sized farmers would also be felt far outside the producing farm communities. We can further assume, therefore, that, were small- and middle-sized producers to stumble, many representatives of agribusiness would also quickly come under financial pressure. The practice of seasonal credits extended to farmers (for seed, fertilisers, pesticides, etc.) by traders illustrates this interdependence particularly well.

Finally, with the increasing failure of small- and middle-sized farms, a trend towards further consolidation and concentration of agricultural production in the hands of fewer and fewer large farms can be expected. This same kind of structural adjustment path corresponds to a dynamic that can be observed in countless contexts of agricultural modernisation. Whereas agriculture in Kızıltepe has perhaps been made more efficient and productive compared to how it was in the past, at the same time these developments are associated with seriously declining employment opportunities in agriculture. Again, the question arises as to whether there are sufficient alternative employment opportunities in other sectors to cushion the blow.

While the local dependence on state subsidies seems to contradict the notion of financially sustainable development, it can nevertheless be argued that a number of the changes observed in Kızıltepe might actually have provided the basis for a thriving and prosperous agricultural sector. In particular, we can point to the introduction of modern machinery and development of the physical infrastructure including irrigation systems and the investments made in roads, sanitation, telecommunications and electricity, although all of this occurred in the conjunction with massive land consolidation. Another change that can be interpreted positively in this regard is the new knowledge and experience that farmers gained in dealing with new technologies, the production of new crops, and the coordination of novel transactions.

The existence of the newly developed infrastructure and the newly acquired knowledge means that Kızıltepe's farmers have undoubtedly come more competitive both domestically and internationally. The knowledge and experience gained would persist, even if state support were reduced or suddenly withdrawn. Finally, it can be assumed that the structural changes are largely irreversible regardless of the macroeconomic success or failure of the state development projects. In other words, a return to the agriculture of the past is no longer possible in Kızıltepe.

In the context of the present work obviously no final answer can be given to the question of whether the changes in Kızıltepe are sustainable economically or not. As far as the long-term development of regional agriculture is concerned, there is no doubt that a much longer period

of investigation is required than the one in which my investigation took place. It should also be borne in mind that the factors which determine the development of a complex sector such as agriculture often lie outside the immediate local and sectoral context itself. According to Teodor Shanin (1986), "rural society and rural problems are [not explicable] any longer in their own terms and must be understood in terms of labour and capital flows which are broader than agriculture" (p. 19). In order to take these and other indirect, longer-term factors into account, additional case studies including a larger sample of variables and generally more quantitative data would be necessary.

10.3 A price to pay? The environmental effects of intensification

Finally, I would like to reflect on some of the environmental impacts of the observed developments. While an in-depth assessment of the environmental impacts of agricultural structural change was not at the centre of this work, I have nevertheless pointed to a number of environmental changes indicating that the structural changes in Kızıltepe have had a significant effect on the ecology in the Kızıltepe plain.

Negative ecological consequences and human health problems from the new practice of burning fields in order to clear them can be expected to ensue. Field burning emerged with the disappearance of extensive seasonal livestock herding. A further environmental issue has been the overuse of groundwater resulting from irrigation and a corresponding drop in the water table in Kızıltepe. Similar to the pattern of overuse of fertilisers, the application irrigation waters was based on a simplistic (and largely mistaken) rationale of "it's better to use too much than too little". The sprinkler systems on the fields operated nearly throughout the whole day, which resulted in significant water losses due to evaporation. In addition to the local consequences of this development, an indirect consequence was increasing water shortage in the mountains north of Kızıltepe, the source of groundwater that fed the aquifer beneath the plain.

Related to the drop in the groundwater level is the already massive and likely increasing use of electricity for the operation of irrigation pumps. Because water table is continuing to fall, ever more energy is needed to pump it to the surface. This has been an ongoing process for at least a decade now. Whereas the need for ever more energy may be imperative from an agricultural producers' viewpoint, overuse was only made possible by unhindered, free access to electricity from the public grid. The state's policy of turning a blind eye to this practice must therefore be regarded as its bearing major responsibility for the squandering of energy on the Kızıltepe plain.

Another consequence of excessive irrigation of Kızıltepe's farm fields, has been soil salinisation. Salinisation of the soil results from improper management of irrigation

management; it is mostly irreversible and eventually leads to crop failures or even a total loss of soil fertility (Scheumann 1997). Worthy of note is that, in Kızıltepe at the time of my field research, there was already much detailed information available from other regions of Turkey, about the causes and consequences of soil salinisation. For instance, massive problems with salinisation were well documented for the Çukurova region (Scheumann 1997); and large areas on the Harran plain in Şanlıurfa Province, neighbouring Mardin, had already been seriously affected by soil salinisation (Tekinel et al. 2002; Bahceci and Bal 2008). Despite these well-documented experiences, a similar development had begun to occur in Kızıltepe. This indicates that GAP planners either did not consider the environmental impacts of their programmes as a priority and/or that they did not take adequate preventive measures. Many farmers were in fact well aware of the risks of advancing soil salinisation. According to one in the town of Kızıltepe, "in ten to fifteen years, nothing will be cultivated on these plots". Landowners in these areas, my interlocutor continued, would simply "earn as much money as possible for as long as possible and then leave the land for good".

Another problem that should be mentioned in connection with environmental degradation is the overuse of fertilisers and other agricultural chemicals. The excessive use of nitrogen or phosphates is not a feature specific just to Kızıltepe; rather, the kind of environmental damage that results from this practice are typical for agricultural intensification everywhere. Excessive use of fertilisers and other agrochemicals in Kızıltepe appears to be just the logical consequence of agricultural production under conditions of uncertainty in a nature-related system. At the same time, however, there are also clear indications that the excessive fertiliser use, for instance, only arose as a result of the Turkish state's policy of subsidising agrochemical inputs. As in the case of the excessive use of water and energy, a major responsibility for this problematic development once again lies with the Turkish state.

Assessing environmental sustainability and the impacts of the agricultural intensification observed in Kızıltepe is highly relevant because it these things will determine the future economic and social development path of the region. In addition to possible health damages for humans and animals, the other environmental problems described may quickly lead to a loss of agricultural productivity and ultimately economic growth. This is even more alarming because so much depends on agriculture as the only really viable economic sector in the region at present, whose performance, in turn, depends directly on the availability of efficient and resilient natural resources.

11 Conclusion

11.1 The urgency to continue debating agrarian change

For more than two centuries, scholars have raised the question how and why agrarian change occurs, and even more importantly to what end it should occur. A long-lasting empirical and political debate has emerged about what "kind of agriculture" humanity should strive for in order for it to be able to fulfil multiple functions. In the past, the "agrarian question" related mainly to the potential of agricultural reform to contribute to natural, monetary and human resources required for urban industrialisation. Today agriculture plays a central role in the context of combatting pressing global problems such as climate change, biodiversity loss and other forms of environmental degradation. Moreover, in light of a continuously growing world population and the widespread persistence of poverty and hunger, agriculture has retained its historic responsibility as a provider of food security and livelihoods.

The increasing number of complex functions agriculture has to fulfil today render the historic questions of "to what end" agrarian change ought to occur and "what kind of agriculture" we need, highly relevant for contemporary research, politics and policy. In fact, the uninterrupted if not heightened relevance of addressing these questions becomes even clearer when we consider that agriculture is recognised simultaneously as a major source of and a potential solution to the many problems humanity faces. Yet, even more than a century after Lenin's and Chayanov's famous disagreement about what development trajectory to favour for the Russian peasantry, much of the contemporary debate about agrarian change and development remains inconclusive. One expression of this can be seen in the ongoing, often polarised turf wars between proponents of one or the other extreme, such as small versus big, intensive versus extensive, organic versus conventional, or protectionist versus market-based. Other, less categorical voices in the current debate stress more differentiated and context-bound positions on the question of what kind of agricultural development is "right" or "wrong". Voices like these usually provide us answers along the lines of "well, it depends".

This study represents a contribution to a growing body of contemporary scholarship on the political economy of agrarian change. To make a meaningful contribution to the ongoing debate is important but not only from an academic viewpoint. Probably and even more importantly, advancing this debate is crucial because, like Lenin's programme for forced collectivisation or the many other ideas that shaped agrarian change throughout the 20th century, much of the theory that dominates today's debate continues to find entry into actual agricultural development interventions and practices. This has major implications for whether and how agriculture can live up to the tasks just mentioned, as well as for the lives of people,

rich or poor, who work in agriculture and who live in the rural areas where agricultural production occurs.

11.2 In-depth case study research and a perspective beyond epistemic silos

The contribution made by this study has been twofold. First it is based on an in-depth empirical case study which traces and explains the political economy of agrarian change on south-eastern Turkey's Kızıltepe plain. The case study offers detailed insights for anyone interested in the current development of state–society relations, agrarian change and rural economic development in Turkey's South-east Anatolia region. Beyond fresh and detailed insights on a very particular place and time, the study's findings also represent an addition of new pieces to the growing puzzle of knowledge on the dynamics of agrarian change in general. The study proceeded therefore with a view to Terry Byers (2003) argument that in-depth case analysis is crucial for any reconsideration of grand theories of agrarian change and social transition.

In carrying out the empirical work, my choice of a qualitative case-study approach has proven reasonable and particularly fruitful for uncovering and explaining the anticipated and the unanticipated contextual peculiarities of agrarian change in Kızıltepe. Especially with regard to unanticipated outcomes, aligning my approach with the principles of qualitative empirical social research proved to be decisive (see chapter5, section 5.2.1). First, this included observing the phenomenon of agrarian change in a *natural setting*, that is, "at the sites where participants experience the issue or problem under study" (Creswell 2014: 184ff). Second, the approach included emphasising *participant meanings*, that is, using the personal problem interpretations of the interviewees as the primary data source. Third, this implied a continued effort at *reflexion*, that is, controlling for (with the idea of eliminating or counteracting) the possibility that my role and personal assumptions could dominate or distort the study. Against this backdrop, approaching the phases of fieldwork and desk work in a sequence of consecutive iterative steps helped greatly to correct and adapt my research questions and assumptions in the sense of a genuine learning process.

The second of the case study's two-fold contribution lies in its deliberate integration or "bridging" of empirical and theoretical works by different epistemic communities. In stressing the need to avoid the common tendency of remaining within epistemic silos, this study argued that integrating these different perspectives is both promising and in fact necessary to further advance research on agrarian change. The integration of perspectives across and beyond epistemic boundaries occurred, first, through the deliberate and systematic use and reconciliation of literature from different schools of thought and academic disciplines. I therefore included scholarship from agricultural and environmental history, social anthropology, rural sociology, agricultural and environmental economics, institutional

economic theory, development studies and many other fields. Second, I introduced an integrative theory-based analytical framework to scrutinise and explain the political economy of institutional and economic change in Kızıltepe's agricultural sector. Using Hagedorn's (2008) IoS framework as my point of departure and conceptual basis, I adapted the framework with the idea in mind of researching agrarian change through a political-economy lens. Political economy is here understood as placing an emphasis on recognising the "political" aspects that underlie any economic phenomena. Associated to this is my recognition of and emphasis on the necessity to pay particular attention to "inequalities" as a potentially decisive factor in the processes of state-driven agrarian change from the early planning phase, through the phase of implementation, all the way to its aftermath. Important building blocks in this regard were derived from a comparative and integrative discussion of neoclassical agricultural economics, Marxist agrarian political economy and economic theories of institutional change.

11.3 State intervention in Kızıltepe: A success story?

Throughout much of the 20th century agriculture has been the most important source of state revenue and employment in Turkey. Nevertheless, despite repeated political attempts at sectoral growth, agricultural development has been slow, especially in the country's impoverished and violence-stricken South-east Anatolia region. In the mid-1990s, amid an escalation of violence between the Turkish military and the PKK, renewed political interest emerged, in trying to address the region's economic problems. The result was the initiation and partial realisation of the South-east Anatolia Project (Güneydoğu Anadolu Projesi or GAP).

The GAP offered substantial financial support to parts of the farming community. This included abundant subsidies for agricultural inputs such as seeds, fuel, pesticides and fertiliser, and grants for the purchase of machinery and on-farm irrigation infrastructure and equipment. Accompanying this financial support, the Turkish government introduced a number of regulatory changes with the goal of fostering and guiding agrarian change. The primary objectives of these combined interventions were productivity increases and gains in economic growth. Turkey's agricultural policy objectives for South-east Anatolia were thus strongly reminiscent of those of international agricultural development policies worldwide in the 1950s and 1960s, when "good farming" was treated as synonymous with output-oriented "intensive farming". This assessment remains valid despite the Turkish government's frequent and dubious claims that Turkish agricultural and development policy — unlike those elsewhere in the past — are economically and environmentally sustainable.

On Mardin's Kızıltepe plain the state's heavy support for the introduction and operation of irrigation systems and mechanised agriculture has resulted in a fundamental change to the

entire modus operandi of local agricultural production. From the early 2000s up to 2013 (the year in which I conducted the final phase of my field research), grain production in the area quadrupled and new cash crops like cotton and maize had almost completely replaced traditional, extensively produced crops. With nearly unhindered access to water, agricultural production could now occur year-round, based on intensive use of machinery and inputs. Cash flows upstream and downstream of production increased to unprecedented levels, offering potentially greater returns for investments, but also triggering a greater need for cash endowment and, associated to this, a greater risk of indebtedness larger than ever before.

The results of the Kızıltepe case study can be summarised as follows. State intervention has in fact been highly successful in catalysing intensification and productivity. Yet, other than envisioned (or at least officially claimed by the state authorities), agrarian change on the plain has not brought about prosperity and growth across all social strata. Agrarian intensification in Kızıltepe has had, accordingly, severe repercussions affecting the social relations of production and reproduction among the rural classes. While large and middle-sized landowners were accorded many new economic opportunities, smallholders and landless wage labourers bore the brunt of negative impacts and generally lost out in the process. The explanation for these dynamics can be found partly in the state's deliberate design of the intervention mechanisms, many of which openly favoured large- and medium-scale production systems over smallholder production. A particularly telling case in point is the fact that public grants to finance the purchase of irrigation pumps and heavy machinery are given to exclusively landowners with holdings of 20 ha or greater. This means that more than half of the landowners in Kızıltepe were excluded from this important support programme (see figure 5, chapter 7, section 7.2.4). Even though other important forms of public support such as input subsidies were formally available to anyone, I nevertheless found evidence that smallholders tended to benefit significantly less from these programmes than middle-sized and large landowners. The reasons for this lay, first of all, in higher transaction costs for smallholders, which made securing necessary information and the formal application for support comparatively — usually prohibitively — costly. Second, among the local agricultural administration staff, there was widespread to grant support to smallholders. Third, much of the support was more beneficial to those farmers who were already participating in intensive irrigation agriculture. Subsidies for gasoline, fertilisers, pesticides, seeds and other inputs were geared, accordingly, to the needs of those who required larger amounts of these inputs as part of the intensive-production regime. By changing the agricultural resource base and the formal institutional environment that governs this resource base, the state has therefore also the people's scope for action and thus their capacity to adapt to the structural changes that occurred in the first decade of the new millennium.

The striking inequality in terms of who benefitted from state support and, in the end, agrarian change overall can only be understood if Kızıltepe's historic inequality in terms of access and control of agrarian productive forces is taken into account. In other words, agrarian intervention was not only designed to exclude the poor, it was also introduced into a social structure that was already, from the outset, characterised by severe inequalities. This resulted in a situation where actors who were already powerful because of their wealth, political connections, social status, or association with a powerful aşiret were presented with greater opportunities and additional resources. The further strengthening of the rural elite was tantamount to aggravating the already glaring imbalance in bargaining power and agency between the landed class and rural labour. Smallholders and landless wage labourers continued to abandon agriculture in their thousands due to their diminished competitiveness and lacking employment opportunities. Being forced to seek employment in other sectors, these traditionally marginalised groups will require some form of state-supported social welfare in order to avert further socioeconomic decline and descent into abject poverty.

11.4 Limitations and further research

Like any piece of research also the present study is limited in what it can cover and explain. The study's limitations are related to the finite resources — financial and temporal — that were available throughout the course of conducting and writing up this research. However, the necessity to limit my scope to an analysis of agrarian change in Kızıltepe, instead of considering the whole South-east Anatolia region, for example, does come with the clear benefit of trading breadth for depth. Rather than aiming to produce a plethora of shallower findings, I preferred to share a few deeper insights derived from a comparatively smaller but by no means atypical case.

Limiting my case study in time and scope also means that I am forced to keep my analysis within those set parameters. My literature reviews in chapters 2 and 3 allude to the fact that agrarian change should in general be seen as a process that spans a much longer time and larger space than the scope of this work permitted; therefore, the task of choosing a precise "starting point" and "endpoint" for analysis within the process was sometimes difficult. The agricultural development policies of the early 2000s were shown to clearly represent a good and purposeful "starting point" in that they resulted in a range of unprecedented changes in Kızıltepe's agricultural sector and in the lives of the people on the plain. Delving further back into the history of agriculture in Kızıltepe might have yielded additional knowledge or possibly even contrasting insights that could not be included at this point; in a similar vein, shifting one's attention to different sets of actors or different arenas of social interaction, too, might have generated further knowledge or, again, potentially contrasting insights, but the scope and depth of this work did not permit that degree of comprehensiveness.

A further limitation to this study, which is related to that latter point, results from my deliberate choice of research questions and theory as well as my choice of research methods. Although this study substantiates the virtues of qualitative research methods for addressing the complexity and contextuality of agrarian change as it occurs in a specific location at a given point in time, quantitative research could have added a range of further insights on a more aggregated macro-level such as the South-east Anatolia region as a whole.

Questions that could be further elaborated on against the backdrop of my findings include, for instance, how many smallholders and middle-sized farmers were actually forced to sell their land in the period under investigation from the early 2000s up to 2013, and how did this contribute to further concentration of landownership in the hands of large landowners? Additional questions along similar lines could include, for instance, how many middle-sized farmers actually defaulted on loans or failed to pay debts, and how exactly did this affect their cost–benefit calculations? Finally, quantitative research could yield further insights into the livelihood and status of the landless population, for example, through comparison of data on unemployment rates, income, or access to social security. Adding quantitative data, as well as a macro-perspective beyond Kızıltepe would certainly be of additional value to anyone in search of concrete policy advice.

Whereas I am aware of the obvious limits and shortcomings of this research work and that further research in Kızıltepe and beyond is needed, I am nevertheless confident that the findings I have presented here are of value with respect to understanding current developments in south-eastern Turkey and also with respect to enhancing the urgently needed debate on agrarian change in general.

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Appendices

Appendix I: Photos from the field

The Kızıltepe plain seen from the top of Mardin's ancient Ulu Mosque, Mardin 2012 (photo: Tuna Ölger).

Sheep herders on fallow land, Mardin, 2015 (photo: Mücahit Yıldız).

Syrian landless wage labourers planting seedlings,
Harran 2011 (photo: Oscar Schmidt).

Syrian landless labourers planting seedlings 2,
Harran 2011 (photo: Oscar Schmidt).

A village at the south-western tip of the Kızıltepe plain,
2011 (photo: Oscar Schmidt).

Landless villagers preparing cow dung for heating, Harran,
2011 (photo: Oscar Schmidt).

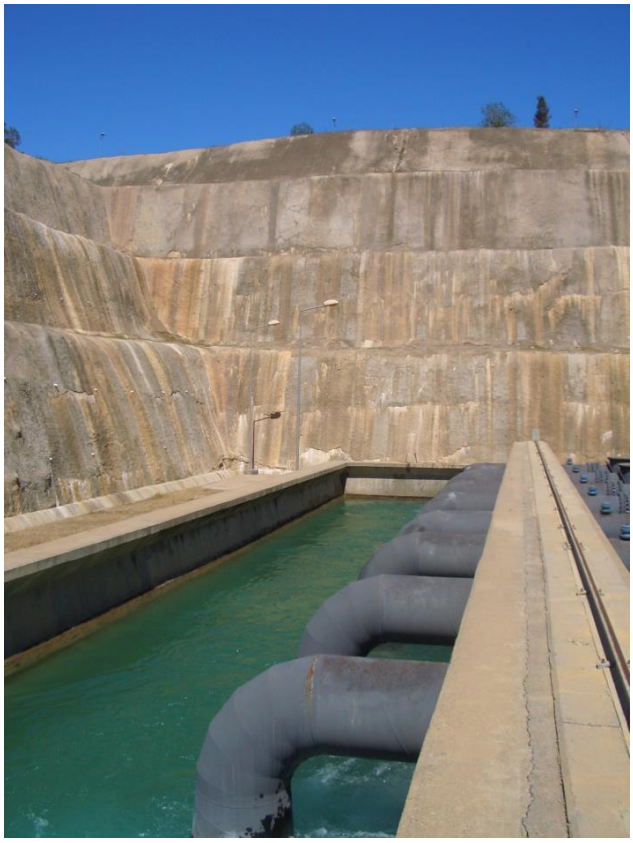
Heavy machinery close to Ipek Yolu. Kızıltepe plain,
2011 (photo: Oscar Schmidt).

Water intensive furrow irrigation. Cotton field, Harran,
2011 (photo: Oscar Schmidt).

Water intensive furrow irrigation. 2. Cotton field, Harran,
2011 (photo: Oscar Schmidt).

Salinisation resulting from irrigation mismanagement.
Wheat field in Kızıltepe, 2012 (photo: Oscar Schmidt).

Atatürk Dam on the Euphrates. Şanlıurfa, 2010 (photo: Oscar Schmidt).



Bozova pumping station. Şanlıurfa,
2010 (photo: Oscar Schmidt).

Appendix II: Questionnaires for semi-structured interviews

Each of the questionnaires used in this study consists of an opening statement, several obligatory open questions and a variety of optional follow up questions. The opening statement and the obligatory open questions were posed in all interviews; the open questions, however, did not necessarily follow in chronological or any fixed order. The optional follow up questions were worded either verbatim as they are appear in the tables below or they were worded in slightly altered form to fit the specific moment of the conversation. The follow up questions were posed whenever I felt that an interviewee's response to a main question so warranted further inquiry, for example, in cases where my interlocuter missed a particular aspect that I felt ought to have been included, whenever a deepening of the topic or greater detail were of particular interest to me, or in cases in which I felt the need for clarification in order to avoid misunderstandings or drawing incorrect conclusions.

Questionnaire landowning farmers

Opening statement: Please tell me about your farm.
Optional follow up questions:
How long have you worked as a farmer?
What crops do you grow? What determines your decision to grow certain crops? How do you plan the cultivation?
Which animals do you have? What determines your decision for the rearing of certain animals?
How large is the area you currently cultivate?
How large are the areas you personally own, how large are the leased areas?
How and where do you market your harvest?
How many people do you employ in your farm? What role does family work play? What forms of hired labour do you use and what role does hired labour play in the operation of your farm?
How do you finance investments in the operation of the farm? How do you finance larger purchases? What role do government support programmes play in this? What role do private sector loans play?
Which machines do you typically use? What inputs do you typically use? Where do you get these machines and inputs?
Which forms of cooperation or cooperation with third parties play a role in your operation? What role do neighbours play in this? What role does your family play?

Open question 1: Are you engaged in irrigation farming? Yes/No
Optional follow up questions:
If no, why not?
If yes, when did you start irrigated farming?

Open question 1: Are you engaged in irrigation farming? Yes/No
Optional follow up questions:
What prompted you to start irrigation and how did you proceed back then?
How did you finance your investment in irrigation?
How do you organise the irrigation process?
What technologies do you use? Which machines are used?
How many people are employed in the different phases of irrigation?

Open question 2: How has your farm changed in the last ten to fifteen years?
Optional follow up questions:
Which events or factors were particularly important?
How would you describe your economic situation in the past? How do you assess your economic situation today? Which events/factors/circumstances were particularly decisive for your particular situation?
How do you assess the development of your economic situation in the future?

Open question 3: How do you personally assess the current development of agriculture in Kızıltepe as a whole?
Optional follow up questions:
Which events/factors/circumstances were particularly decisive for this development?
Which problems/obstacles do you consider to be particularly important?
What expectations do you have for the completion of the South-east Anatolia Project at Kızıltepe?
What significance does the project have for the region? What significance does the project have for you personally?
How do you assess the future development of the sector and what expectations do you have for your own business against this background?

Questionnaire landless farmworkers

Opening statement: Please tell me about your work and life as a farmworker.
Optional follow up questions:
How long have you been working as a farmworker?
Are you from Kızıltepe? If not, where are you from originally?
Are other family members of yours currently also working in agriculture?
Which kinds of labour do you typically do on the farm?
What kinds of skills are important in the context of your work?

Opening statement: Please tell me about your work and life as a farmworker.
Optional follow up questions:
Do you have employments outside of agriculture as well? If yes, what do you do, when and how often? If no, why not?

Open question 1: Who do you typically work for?
Optional follow up questions:
Do you work for the same landowner every time or do you regularly change your employers?
Do you usually work for landowners from your own village or for anybody offering work?
What determines your decision to work for a specific landowner?
How would you in general describe the relationship between landowners and farmworkers in Kızıltepe?

Open question 2: Please tell about how you typically find work?
Optional follow up questions:
How do you typically obtain information about employment opportunities and wages?
Do you find work throughout the year?
How do you establish contacts with potential employers?
How do you typically find an agreement on your tasks, working hours and remuneration?

Open question 3: How has work in agriculture changed in the last ten to fifteen years?
Optional follow up questions:
Which events or factors would you say were particularly important?
How would you describe your economic situation in the past? How do you assess your economic situation today? Which events/factors/circumstances were particularly decisive for your particular situation?
How do you assess the development of your economic situation in the future?

Questionnaire agribusiness

Opening statement: Please tell me about your business.
Optional follow up questions:
Since when have you been working as a dealer for machinery/inputs?
What kinds of products do you sell/are you specialised in?
What prompted you to start your business and how did you proceed back then?
What determined your decision to specialize in your field?

Open question 1: Who are your typical customers?
Optional follow up questions:
Which customer group is most important and why?
Do you sell to local customers mostly?
Are most of your customers regulars? Or do you mostly sell to strangers?

Open question 2: Please describe how purchases, payments and deliveries are typically organised.
Optional follow up questions:
What kinds of purchases are typically made (scale/type/value)?
How are your goods typically paid for?
From your personal experience, how do your customers usually finance their purchases?
Are there times of particularly high demand for your products? Please elaborate.
Where do you typically purchase your goods from? Please describe how you typically proceed on this regard.

Open question 3: How would you assess the present market for agro-inputs in Kızıltepe?
Optional follow up questions:
Which factors/circumstances are particularly decisive for the current situation?
Which problems/obstacles do you consider to be particularly important?
Where do you see opportunities, where do you see risks?
How would you describe your personal economic situation in the past? How do you assess your personal economic situation today?

Open question 4: How do you project the future development of the sector and what expectations do you have for your own business against this background?
Optional follow up questions:
How do you assess the development of your economic situation in the future?
Which factors/circumstances do you deem particularly decisive for your future situation?
What expectations do you have for the completion of the South-east Anatolia Project at Kızıltepe?
What significance does the project have for the region? What significance does the project have for you personally?

Questionnaire agricultural administration

Opening statement: Please tell me about the work and responsibilities of your administrative unit.
Optional follow up questions:
What are the major goals of your units work?

Opening statement: Please tell me about the work and responsibilities of your administrative unit.
Optional follow up questions:
What are currently the most important tasks performed by your unit?
Which policy programmes/goals guide your unit's current work?
Which laws/legal regulations guide your unit's current work?
What other administrative units or organisations are important/influential and why?

Open question 1: What are your personal tasks and responsibilities in this context?
Optional follow up questions:
What is your personal educational/professional background?
Since when have you been working in this unit/position?
Where did you work previously in your career?
What motivates you to work in the region?
Who do you typically work with/for? (actor groups/ organisations)

Open question 2: How do you personally assess the state of the region's agricultural sector?
Optional follow up questions:
What is the sector's current development trajectory? What factors are decisive for this trajectory?
What are major trends and how do you explain these trends?
Where do you see opportunities, where do you see obstacles for the sector's further development?
What role should and can the state play in the context of the region's agricultural development?

Open question 3: How do you project the future development of the sector in Kızıltepe and the wider region?
Optional follow up questions:
Which factors/circumstances do you deem particularly decisive for your future situation?
What expectations do you have for the completion of the South-east Anatolia Project at Kızıltepe?

Appendix III: Interviews conducted during fieldwork phases

Table 5: Number and composition of stakeholder interviews Phase II

Actor Description	No. of Interviews	Stakeholder Group	Location	Sample No.
Senior staff, GAP Regional Development Administration	1	State	Şanlıurfa	I
Senior irrigation engineer, General Directorate of State Hydraulic Works (DSI)	2	State	Şanlıurfa	I
Senior engineers, Bozova Pumping Station	2	State	Şanlıurfa	I
Senior staff, Akçakale Water Users Association	3	Farming Community	Şanlıurfa/Akçakale	I
Senior researcher, Harran University	3	Research	Şanlıurfa/Harran	I
Agriculture Farmworkers, Harran Irrigated Fields	2	Farming Community	Şanlıurfa/Harran	I
Total interviews exploration	**13**			

Table 6: Number and composition of stakeholder interviews Phase III

Actor Description	No. of Interviews	Stakeholder Group	Location	Sample No.
Senior staff, Wheat Traders Association, Kızıltepe	2	Agribusiness	Mardin/Kızıltepe	II
Agricultural Credit Cooperative, Mardin	1	Agribusiness	Mardin Centre	II
Meat factory owner, Harran	1	Agribusiness	Şanlıurfa/Harran	II
Dairy factory owner, Kızıltepe	1	Agribusiness	Mardin/Kızıltepe	III
Cadastral Surveyor, Mardin	1	Agribusiness	Mardin Centre	II
Head, Land Registry Mardin	1	State	Mardin Centre	II

Actor Description	No. of Interviews	Stakeholder Group	Location	Sample No.
Trader Agro Inputs, Kızıltepe	1	Agribusiness	Mardin/Kızıltepe	III
Total interviews empirical phase I	**8**			

Table 7: Number and composition of stakeholder interviews Phase IV

Actor Description	No. of Interviews	Stakeholder Group	Place	Sample No.
Trader Agro Inputs, Kızıltepe	1	Agribusiness	Mardin/Kızıltepe	III
Deputy Mayor, Kızıltepe	1	State*	Mardin/Kızıltepe	III
Senior Staff, provincial extension service, Mardin	2	State	Mardin Centre	II
Owner, real estate business	1	Agribusiness	Mardin/Kızıltepe	III
Hired machine operators, Nusaybin	2	Agribusiness	Mardin/Nusaybin	III
Senior engineer, public electricity provider	1	State	Mardin/Kızıltepe	II
Illegal migrant farm labourers, Nusaybin	2	Farming community	Mardin/Nusaybin	III
Migrant farm labourers, Kızıltepe	1 group interview	Farming community	Mardin/Kızıltepe	III
Representative, Municipal Budget Commission, Mardin	1	State*	Mardin Centre	III
Agha, large landlords, Kızıltepe/Derik	4	Farming community	Mardin/Kızıltepe/ Derik	I + II + III
Middle-sized family farmers, Kızıltepe/Derik/ Nusaybin	6 + 1 group interview	Farming community	Mardin/Kızıltepe/ Derik/Nusaybin	II + III
Smallholder family farmers, Kızıltepe/Derik/ Nusaybin	5	Farming community	Mardin/Kızıltepe/ Derik/Nusaybin	II + III
Total interviews empirical phase II	**26 + 2 group interviews**			